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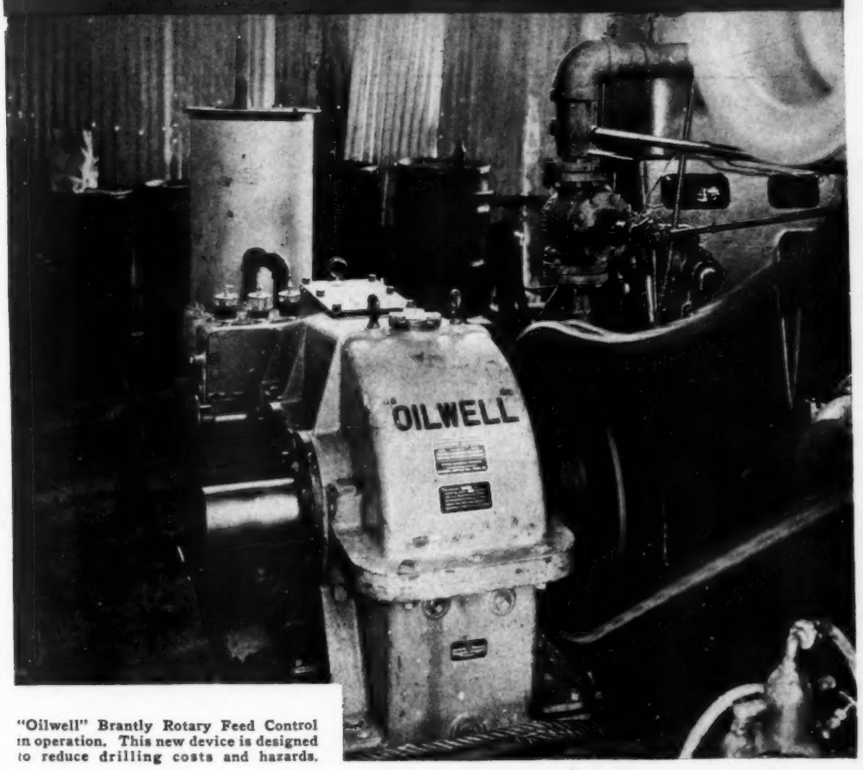
Another New Oil Field development goes on



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GMC DUAL PERFORMANCE Assures greater gas mileage . . . less wear on engine . . . more work, more profits.

Here, to be sure, is one of the few major truck refinements of the past ten years—one that shrewd operators by the hundreds have been quick to earmark as *the feature of 1935 truck design.*

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"This particular unit is better adapted to our work than anything we have ever used."
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"We are sure this type of rear axle is the most satisfactory unit for heavy duty work at a minimum cost of operation."
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Continuation of Good Position Assured With Curtailment to Requirements

By ANDREW M. ROWLEY

WITH a new record in domestic consumption of gasoline being established and demand for crude oil close to the all time peak, the latest figures available showing a total demand in June of 2,966,500 barrels daily, the question naturally arises why prices have not advanced and why there has been talk of a possible reduction. Stocks of refinable crude are the lowest since 1927, and there is every prospect consumption will continue at a high level.

There is no basis for a reduction in crude oil prices but, at the same time, regulation of production, with a resulting greater ultimate recovery from known reserves; the extension of life of new fields through regulation of output and improved production practices; and the ability to calculate accurately the quantity of recoverable oil within reservoirs, all have combined to prevent any great change in crude oil price schedules over short periods. With the advent of proration and strict enforcement in most areas, there no longer was any necessity for carrying large, burdensome and costly stocks of crude in storage and companies have been depleting their above ground storage every year since 1929 with the exception of 1933. This policy is due entirely to changed conditions coming with proration and has no relation to crude oil prices.

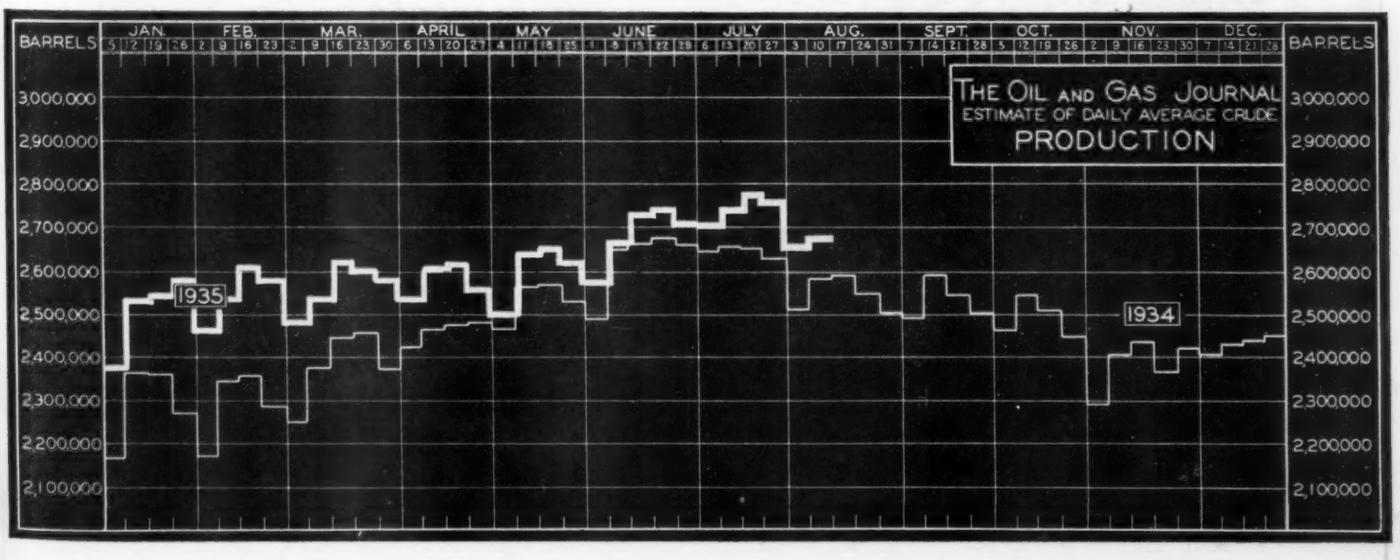
Extensive price changes are not probable under proration, strictly enforced and including all prolific areas. The present position of the industry points to a gradual strengthening of markets with possible small advances in price when the industry is assured production allowables will be kept within consumer requirements when the season of peak demand has passed. Continuation of the present high level of production, both for crude and refined products, simply delays announcement of better prices.

Rodessa continues to be the center of interest in field operations with opinions somewhat varied as to the extent of oil production. When some of the nine wells now actively drilling in the area are completed, the industry will have a far better picture of what to expect. The discovery well is holding up well and many believe the field, extending possibly into Texas, will be a large producer. Others are not enthusiastic about lime production and are not worrying about a flood of oil. All admit the attitude of Louisiana officials regarding proration to demand is an important factor.

Production 2,689,315, Increase 29,409

Estimated daily average production for the week ending August 10, a comparison with previous week and one year ago follows:

	Aug. 10	Aug. 3	Aug. 11, 1934
Oklahoma—			
Oklahoma City	144,925	136,850	195,370
Seminole-St. Louis	98,555	97,500	100,825
Remainder of State	252,890	264,425	238,805
Total Oklahoma	496,370	498,775	535,000
East Texas—			
Lathrop	160,076	161,966	202,015
Kilgore	152,127	152,520	146,836
Joiner	150,327	153,337	130,995
Total East Texas	462,530	467,823	479,846
West Texas	142,530	151,529	147,820
North Central Texas	89,405	82,945	92,344
Texas Panhandle	51,150	51,923	56,325
East Central Texas	46,988	47,054	51,197
Gulf Coast—Texas	182,684	180,454	175,242
Southwest Texas	57,203	56,552	53,636
Total State of Texas	1,032,490	1,038,280	1,056,410
Kansas	139,250	145,725	129,325
North Louisiana	27,075	24,790	24,365
Gulf Coast—Louisiana	117,350	113,045	67,871
Total Louisiana	144,425	137,835	92,236
Arkansas	30,465	30,360	31,365
Eastern Fields (except Michigan)	106,500	106,000	103,000
Michigan	42,245	45,701	29,899
Rocky Mountain area	108,320	108,230	97,390
California—			
Santa Fe Springs	41,850	37,500	41,400
Long Beach	79,000	75,000	68,150
Mountain View	33,000	30,000	6,250
Elwood	12,750	15,500	12,000
Kettleman Hills	61,250	61,000	63,000
Remainder of State	361,400	330,000	322,200
Total California	589,250	549,000	513,000
Total United States	2,689,315	2,659,906	2,587,625



The Bulletin Board

TEXAS GAS LAW is sustained by three-judge federal court in case from Nueces County. Also upheld by State Court of Appeals in case from the Panhandle Field.

IN REAGAN COUNTY, Texas, a survey of the abandoned wells has shown that all the equipment was damaged by the sulphur and salt water found in that locality.

ASPHALT FORMED from the oxidation of motor oils tends to increase the coefficient of static friction. When the asphalt is removed, the coefficient of friction is found to be the same as before oxidation.

OVERPRODUCTION IN EAST TEXAS is again estimated approaching 45,000 barrels daily. State Railroad Commission held obliged to enforce spacing law as interpreted by Texas Supreme Court, pending rehearing.

VISCOSITY MAY be measured by timing the progress of an air bubble as it travels upward through a given column of oil. The method is said to yield more concordant results than the standard method that has been used in this country.

GOVERNOR ALLRED of Texas wires thanks to President Roosevelt for limiting his oil legislation recommendations to approval of the interstate compact without interference with the Constitutional rights of states.

DETERMINED EFFORT is being made by Texas Attorney General's department to have East Texas pits emptied of confiscated oil destroyed so they cannot be refilled again and again with excess oil.

SENATOR THOMAS accepts new Connally bill but Chairman Cole of oil subcommittee of House prefers to wait until it is seen what action the Senate will take before withdrawing his committee's bill.

SUCKER ROD FATIGUE cannot be anticipated by studying the characteristics of the metal under ordinary atmospheric conditions. Failure of such equipment is a function of the corrosive elements present in the oil or ground water in which the rod works.

SENATOR CONNALLY introduces new oil bill in Senate at Washington approving interstate compact, limiting imports and extending Connally Act, as only oil legislation having a chance at this session. Federal control provisions are omitted.

RODESSA DISCOVERY in Caddo Parish, Louisiana, revives activity throughout Louisiana and Eastern Texas. Glen Rose formation to be widely tested in both states.

INTERFACIAL TENSION at the oil-water and the water-silica contacting surfaces tends to prevent the spreading of water over the silica, thus reducing effect of flooding oil sands.

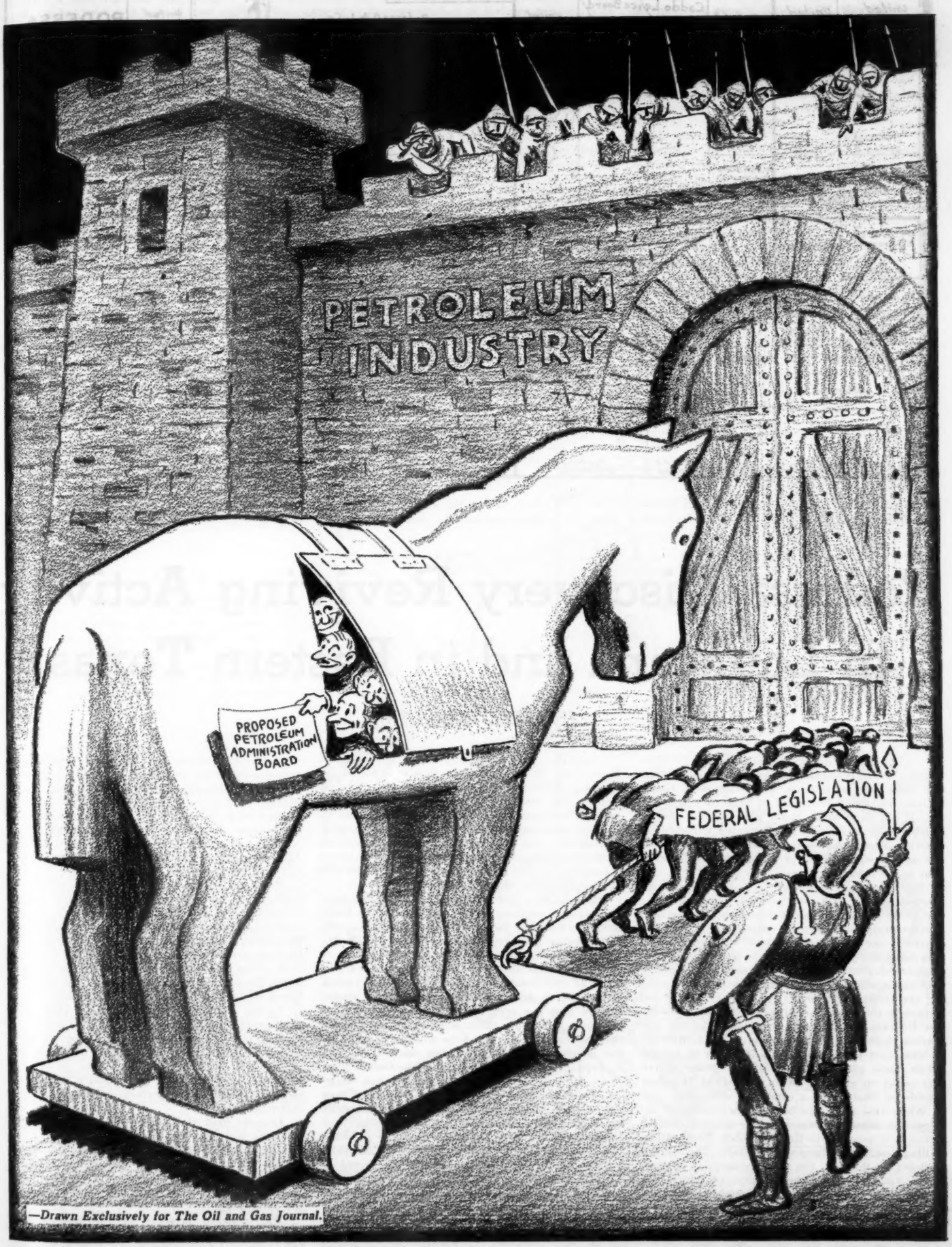
IMPROVEMENT in oil situation due to increased demand for petroleum products is being checked by excessive production of crude, as reflected in Bureau of Mines monthly report for operations in June.

PALISADES SECTION, Playa Del Rey Field, California, is passing out of the picture quickly. Operators may have to resort to pumping within few months unless they conserve gas energy in the field.

DECLINE IN NATURAL gasoline production which began in February was checked in June but stocks decreased compared with the increase recorded during May.

LOW LIQUID LEVEL and lack of water drive in the Oklahoma City area are creating a problem of deep well pumping of unusual importance along engineering lines.

Beware!



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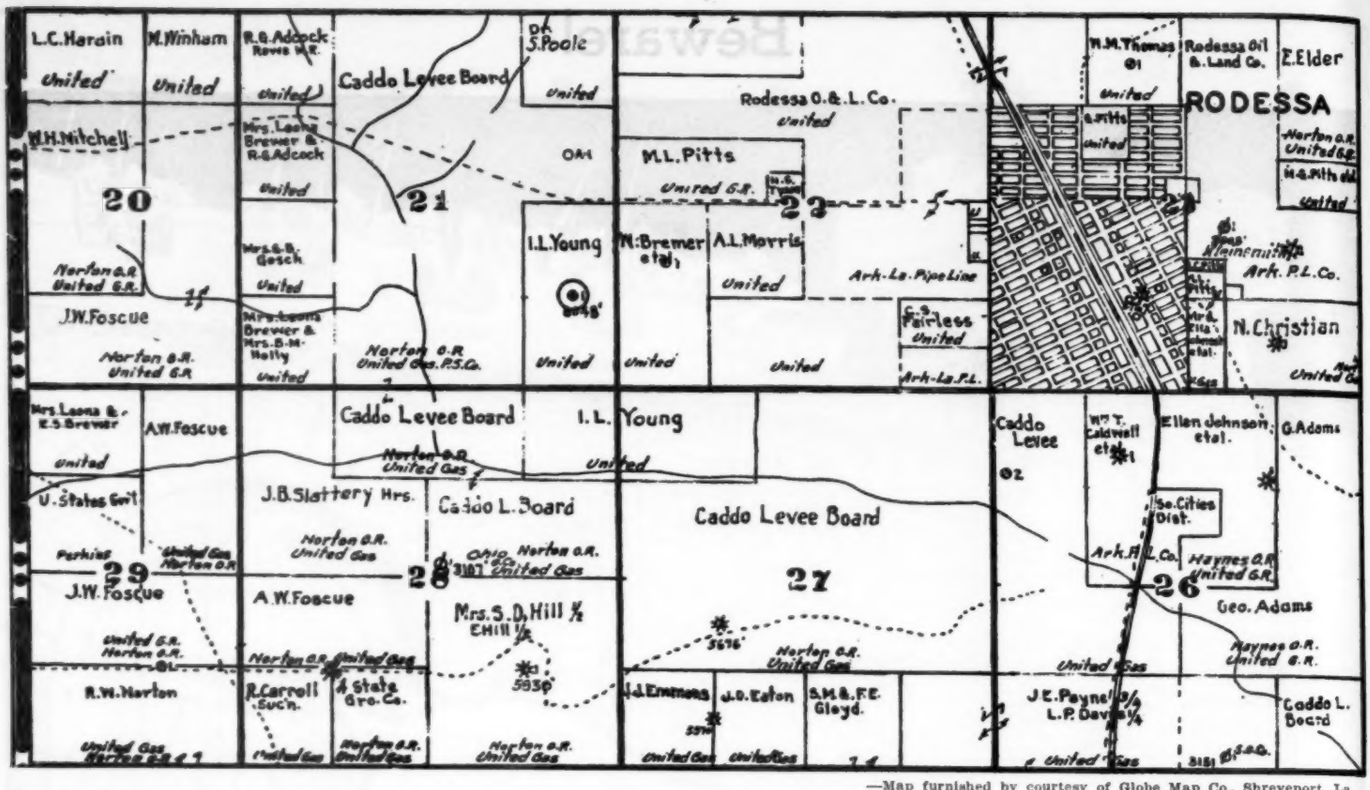


—Map furnished by courtesy of Globe Map Co., Shreveport, La.

Map of Glen Rose development at Rodessa showing location of United Gas Public Service Corp.'s No. 1 Young, oil discovery well of the field and also of the Glen Rose formation. It is approximately a mile north of gas production. All the old shallow tests are shown

Rodessa Discovery Reviving Activity in Louisiana and in Eastern Texas

By NEIL WILLIAMS

WHEN UNITED GAS PUBLIC Service Corp. brought in its famous gusher from the Glen Rose at Rodessa in northwestern Caddo Parish, northwest Louisiana, a little over a month ago, it did more than open a new field—it started a Glen Rose boom which is bringing a revival of activity throughout North Louisiana, South Arkansas and Eastern Texas in exploration for production in the lower horizons.

Immediately, the discovery is resulting in an intense leasing and royalty play following along the trend of the basement fault which cuts in a northeasterly-southwesterly direction across the northern portion of the Sabine Uplift. It is on this fault trend that Rodessa is located and it is expected similar fields will be found to the northeast and southwest. There are some who are playing the trend continuously from up in Miller and Lafayette Counties in southern Arkansas, through the Rodessa area, and across Cass County and Marion County in Eastern Texas to the southwest.

This is a play some 50 to 70 miles in length. While those playing the trend the entire length may count on an East Texas sized field, it is not considered likely such a condition will exist.

While this play has become the center of interest, all other structures in the general district where it is possible to find the Glen Rose within drilling reach have become important. The United producer at Rodessa, the first commercial oil well in the Glen Rose, or the Trinity, of which the Glen Rose is a member, has definitely established the productivity of this formation; consequently, there is a renewed incentive for prospecting both old and new structures for Glen Rose and other Trinity potentialities.

The Glen Rose for many years has been believed to be an oil formation—now it is known. In the past production has been largely gas. This gas usually has been very wet and of considerable volume, indicating large reserves, and in some instances showings of oil have been encountered. During the past several years there has been no particular inducement for development of these potentialities, and throughout the entire division drilling has been decidedly inactive.

Rodessa as a field in itself is one of the most important discoveries in the North Louisiana-South Arkansas-Eastern Texas division in many years, and possibly may establish itself as a major discovery for the entire Mid-Continent. There is no question of the discovery well being a good producer of considerable potentialities, both in volume and pressures. It is indicative of a field of sizable reserve and per acre recovery. The pay horizon is known to be very thick and has proved consistently uniform in the gas area which has been under development and producing since 1930.

Production at Rodessa is from the Oolitic limestone, a thick marine section of limes and shales constituting the upper part of the lower Glen Rose immediately underlying the well known anhydrite zone. This is the same horizon of the Glen Rose which has been producing the wet gas in other areas, as well as at Rodessa. It has been commonly believed this new oil production was found in a lower horizon of the Glen Rose than yet drilled but this is not true, the discovery merely being down dip in the horizon from the gas zone.

The discovery well is 1,339 feet north and 549 feet west of the SE cor. Section 21-23n-16w, approximately a mile north of the gas producing area and away from the fault. In the latter area, the gas is being produced from the horizon at depths ranging from 5,500 to 5,800 feet. Bottom of the oil well is 6,048 feet with the top of the horizon in it being found 175 feet down dip from the highest of the gas wells drilled so far.

The well, variously estimated as good for from 12,000 to 15,000 bbls. daily, has been given a potential of 6,600 bbls.

As originally completed July 7, the well flowed initially at the rate of 116 bbls. an hour through a half-inch choke on the tubing, gauging a pressure of 715 pounds on the tubing and 1,000 pounds on the casing closed in. Because of leaks, believed to be from around some of the collars of the 7-inch flow string, the well was killed, and a string of 5-inch liner run in and cemented at the top of the 5-inch perforated liner already in the hole.

In the setting of the well, the 7-inch casing was cemented at 5,594 feet with the 5-inch perforated pipe set on bottom and sealed off in the casing with lead seal to 5,559 feet, making a total of 489 feet of perforated liner. Due to the high pressures, operators did not consider it advisable to attempt to pull the perforated pipe and run an entire new string.

Brought back the second time on July 24, the well has been flowing under varying tests, to determine the most efficient rate of flow, taking into consideration conservation of reservoir energy and reserves.

Results of some of the tests are indicated in the following:

The closed-in pressure of the well is 2,369 pounds. The initial bottom hole pressure was 2,745 (corrected for temperature). Bottom hole tem-

perature is 192 degrees. On a two-hour flow at 28.15 bbls. per hour bottom hole pressure dropped 119 pounds, this figuring 4.25 pounds drop per barrel. On an hour and a half flow at 57.5 bbls. per hour, the bottom hole pressure dropped 192 pounds, or 3.34 pounds per barrel. By this showing the bottom hole pressure at the latter higher rate of flow was greater per barrel of oil produced than it was at the lower rate of flow.

At the same time, the gas-oil ratio at the above rates of flow was 1,000 feet per barrel while when the well was flowed at the rate of 500 bbls. an hour the ratio dropped to 500 feet per barrel.

Operators next will attempt to take bottom hole formation samples to study the porosity of the formations and effect of different rates of flow.

The oil is 43.6 gravity and a laboratory analysis shows 27.5 per cent of 62 gravity gasoline with an octane number of 42; 17 per cent 47.8 gravity kerosene; 45 per cent 37 gravity gas oil (pour test 75); 9 per cent 16 gravity fuel; 1.5 per cent loss; sulphur content 0.1 per cent.

As there is nothing so far to determine the water table, the extent of the Rodessa Field cannot be estimated. The Glen Rose is very thick at this place and will permit much deeper drilling but the distance out from the fault and the gas zone to which production can be extended will depend largely on the water level. The gas area in itself has not been defined in any direction, except so far as the fault limits it. It extends a distance of approximately 3½ miles so far along the fault and is approximately 2 miles wide. In this area, which extends into Cass County, Texas, there are 21 gas wells, ranging from 50,000,000 to 100,000,000 feet daily in capacity. Seventeen of these wells are owned by United Gas Public Service Corp. (one on the Texas side being in the name of the United Production Corp.), and four by Arkansas-Louisiana Gas Co. There have been no dry holes drilled to the Glen Rose.

DEVELOPMENT HAS BEEN carried on steadily but consistently since 1930, when the first well was completed. Operators have attempted to drill on a 60-acre unitized basis. Development of the oil zone is expected to be on an equally systematic basis, probably in 40-acre units. The acreage in the immediate Rodessa district is in limited hands. United Gas Public Service Corp. and R. W. Norton, the largest owners control upwards of 45,000 acres along the fault trend taking in Rodessa area (ownership on the Texas side of the line is held in the name of the United Production Corp.). Of the 45,000 acres, 25,000 is practically solid immediately around Rodessa. Arkansas-Louisiana Gas Co. is the next largest owner with between 1,000 and 1,500 acres in the immediate district, most of which may prove in the gas area. Haynes Production Co. has several favorable tracts, while scattered small pieces are held by H. L. Hunt, Alfred Glass, Bert Kouns and Omar Rowe.

While there are 10 rigs active around Rodessa and numerous permits have been taken out, the active tests are scattered over a fairly wide area to prove up acreage, and it is not anticipated any operators will attempt unnecessary drilling.

Production from the United well is being run by the Standard Pipe Line Co., which has laid an 8-inch line 8 miles to Ida station on its trunk line to Baton Rouge.

The townsite of Rodessa is on the structure but it offers no threat as it is believed entirely in the gas area. Arkansas-Louisiana Gas Co. controls approximately 90 per cent of the townsite leased from single fee ownership, Rodessa Oil & Land Co., and has one gas well on this property in the townsite. Not more than 50 town lots are held by other owners and the possibility of these being out of the oil picture offers no inducement for drilling as there is an abundance of gas reserve.

The State of Louisiana is collecting 11 cents gross production tax on all the oil produced. This no doubt is an inducement for the State to encourage development and increased production from the wells, and several state leaders have openly expressed a desire that Rodessa Field be opened. The attitude of the operators, however, is almost unanimous in a desire to control and conserve the production and energy.

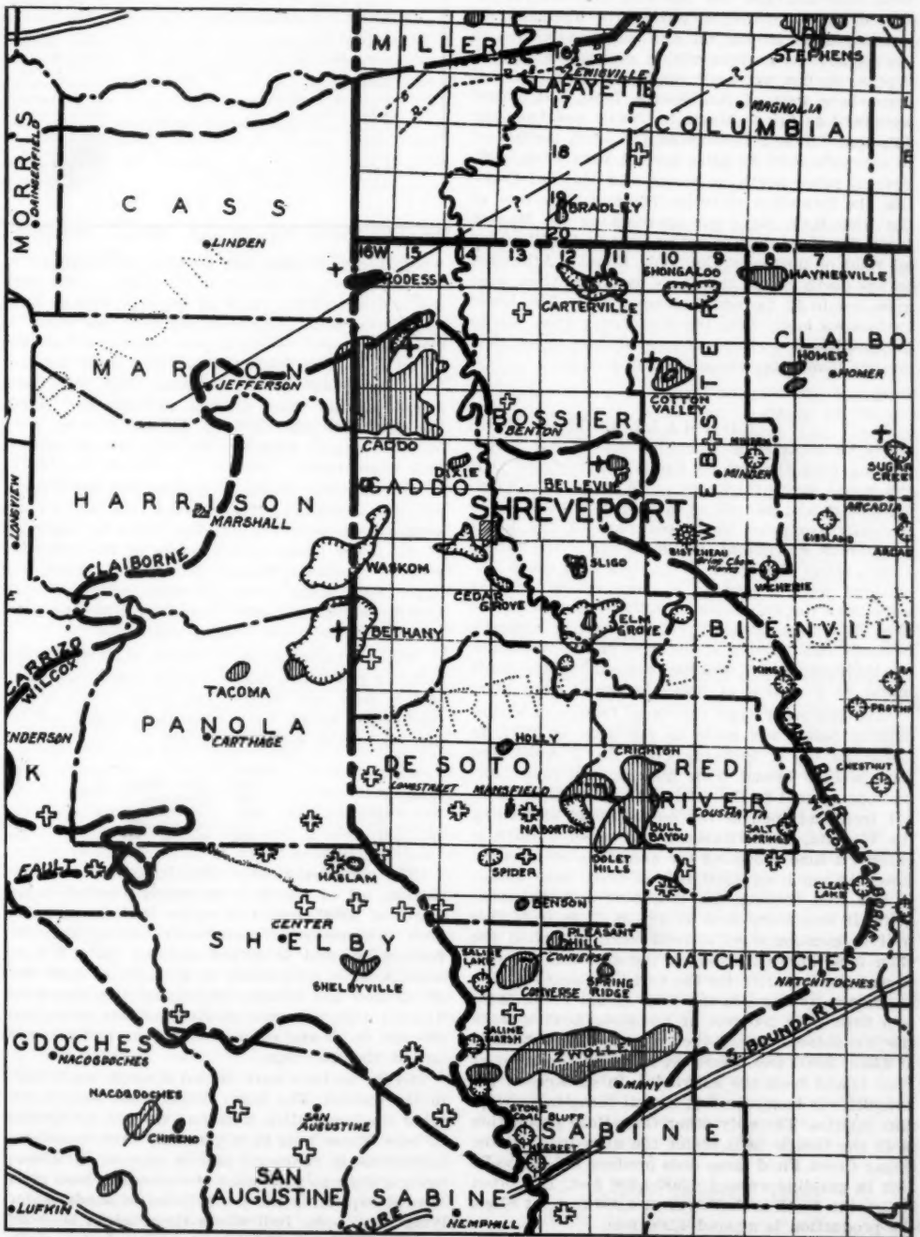
The Rodessa area is on the north, or upthrow side of the fault with formations dipping to northwestward off the Sabine Uplift.

Among those instrumental in bringing to light the Glen Rose production at Rodessa has been Dan L. Perkins, independent geologist, who leased the nucleus of what now comprises the block on which United has opened the field. Mr. Perkins, who had made a close study of the various shallow wells in the area dating back to 1910, became convinced of the existence of the fault through the area, mapped out the structure, and in 1924 and 1925, when the leases were released by former owners, got together a block of some 6,000 acres.

Previously as many as 10 tests had been drilled in the area. The deepest was 3,266 feet. One test drilled by Latex Community Oil Co. in 1922 and on the same 20-acre tract on which the discovery Glen Rose gas well was completed, found a sand at 2,800-2,900 feet which produced a small amount of oil for a few days. Another a short distance away had some showings in the same horizon but with these two exceptions there had been no production nor showings before the blocking by Mr. Perkins and leases of all former owners were given up.

After acquiring the block, Mr. Perkins, in conjunction with W. J. Stauffer of New Orleans, drilled a test to 3,002 feet. Located some distance northwest of present development, this test proved structurally low and was abandoned. In 1926, he made a deal with Ohio Oil Co. to drill on the block for some of the acreage. This company in 1926 and 1927 drilled a series of seven shallow tests, the deepest being 3,196 feet, all dry, and assigned the leases back to Mr. Perkins. He, then, in January, 1928, made a trade with Humble Oil & Refining Co. but this company shortly turned the leases back without drilling. In the same year, Mr. Perkins convinced R. W. Norton, an independent operator, then of Shreveport, but now of San Antonio, of the deep possibilities. Mr. Norton late in 1929 started a deep test, No. 1 Hill, Section 33, which at a total depth of 5,506 feet in the Oolitic lime of the Glen Rose, was completed August 2, 1930, as the discovery gas well.

Mr. Perkins and Mr. Norton then made a deal with the United Gas Public Service Corp. to take over the block and together they began adding to the original 6,000-acre block until now along the



—Map furnished through courtesy of H. D. Easton, geologist, and Globe Map Co., Shreveport, La.

Regional map of North Louisiana-South Arkansas-Eastern Texas district showing location of the various fields in respect to Rodessa, also the fault line on which the field is located and along which an intensive leasing and royalty play is taking place. The heavy contour line does not indicate the shape of the Sabine uplift, which is far different, but rather shows the Wilcox-Claiborne contact. The surface within the contour is of Wilcox time, this being flanked by Claiborne deposition. The region extending westward from the Monroe fault to Mexia, Tex., on the west and from the Angelina-Caldwell flexure on the south to about 30 miles north of Texarkana, Ark., is believed to have possibilities of production of oil and gas from the Glen Rose. Fields with Glen Rose production in the various areas are indicated on the map with a cross

fault trend they have a total of approximately 45,000 acres, and Mr. Norton and United are the largest owners in the district.

Rodessa represents the deepest known Glen Rose production in the so-called Northwest Louisiana-South Arkansas-Eastern Texas district, the drilling depth being 5,500-6,200 feet. Bellevue, 15 miles east of Shreveport, represents the shallowest. There the anhydrite series of the Glen Rose is punched up and truncated so a well in the Nacatoch sand field in the center would continue on down without hitting this pay zone. Off to one side, however, the horizon is encountered and some production of both oil and gas has been found around 1,800 feet.

Other fields in the district in which production (gas) has been found in the Glen Rose are: Pine Island, Caddo Parish, south of Rodessa; Cotton Valley, Webster Parish; Sugar Creek, Claiborne Parish; Sligo, Bossier Parish, just east of Shreveport, and Bethany, in Panola County, just across the line from Louisiana. Out of this district, the formation has proved productive of gas at Cayuga, northwest Anderson County, around 9,000 feet.

A territory fully 200 miles across in an east-west direction and 150 miles north-south, or an area of approximately 30,000 square miles, may be considered as having oil and gas possibilities in the Glen Rose horizon within reasonable drilling depths. Such a territory would begin on the east somewhere west of the Monroe fault and extend westward as far as Mexia in Texas, and from the Angelina-Caldwell flexture on the south northward to approximately 30 miles beyond Texarkana, Ark. Several miles north in Sevier and Howard Counties, the formation outcrops. The anhydrite zone of the Glen Rose plays out approaching the Monroe fault. The formation is not present in the Stephens oil field of northeast Columbia County, Arkansas, on the north end of the above described Glen Rose area, nor in El Dorado-Smackover area. The lower Cretaceous beds, from the Smackover area, dip to the southwest and are truncated, the upper Cretaceous blanketing these truncated edges.

NORMALLY, GLEN ROSE might be expected at excessive depths, but deeper drilling over the Sabine Uplift has revealed that the usual great thickness of Washita and Fredericksburg and sometimes the upper Trinity, which normally comprise the upper part of the lower Cretaceous, are absent. In the lifting of the Sabine Uplift above the upper Cretaceous seas those formations were eroded to a large extent so that sometimes the anhydrite, a definite marker of the Glen Rose immediately overlying the pay horizons, is found immediately at the base of the Woodbine, or between the Woodbine and anhydrite there might be a section of lime, the upper Glen Rose.

The discovery that the Glen Rose was within drilling reach was made as far back as 1921, in Louisiana Oil & Refining Co.'s No. 1 Ardis and Lay, in Pine Island. This historic well found formations normal to the base of the Woodbine at 2,381 feet, and then at the base instead of finding the Washita, Fredericksburg and upper Trinity, it entered a lime overlying the anhydrite of the Glen Rose. As much as 3,000 feet of beds were absent in this well between the Woodbine and the anhydrite. It was abandoned as dry at 2,946 feet. This well is mentioned as it really can be called the Glen Rose discovery well of the area and because it was the incentive for the early exploration.

On the average, in the Pine Island Field, there is a little over 200 feet of limestone next beneath the Woodbine and then the bit enters the anhydrite at about 2,000 feet. Some oil has been produced at Pine Island from the anhydrite. In such cases, the anhydrite is honeycombed, the oil being in crevices and cavities. The only other Glen Rose production is in the Oolitic beds under the anhydrite. In the Sugar Creek Field these beds produce big gas wells rich in gasoline around 4,300-4,400 feet. In Cotton Valley the depth is shallower at 4,200 feet. At Sligo, the production is around 4,200 feet.

At Noble, down nearer the Angelina-Caldwell flecture, the anhydrite zone was topped at 5,490 feet and an important sand and sandy shale zone found from 5,730-64 feet containing much water and an odor of oil. This well went to a total depth of 7,154 feet and is one of the deepest holes in North Louisiana.

These records are given to show the depths at which the Glen Rose pay horizon can be found at various places, to indicate development of the horizon is easily within reach of the drill, and on local structures with proper trapping of oil there is every possibility of developing additional reserves of oil from this horizon. The Glen Rose has not been developed before because there has been practically no deep drilling through the North Louisiana-Arkansas-Eastern Texas division, even deep drilling as deep drilling was thought of several years ago.

Development of the Glen Rose and the Trinity series is of particular interest in view of its enormous thicknesses. The Trinity, which is a portion of the lower Cretaceous, consists of the following general members: Upper Trinity red series, the upper Glen Rose lime and shale series, the anhydrite series, the lower Glen Rose lime and sand series, and the lower Trinity red series.

The anhydrite series, in which there is a possibility of production under certain conditions, in itself is from 400 to 600 feet thick. Some of the thicknesses which have been encountered are indicated by the following depths:

	Feet		Feet
Bellevue	500	Pine Island	450
Bethany	550	Richland	450
Bull Bayou	600	Rodessa	750
Cotton Valley	500	Sugarland	550
Homer	500	Zwolle	370

The underlying lower Glen Rose lime and sand section, all of which is definitely marine, is upwards of 2,000 feet thick in the Rodessa area and such thicknesses offer extensive opportunity for finding gas and saturated sections. In a few instances, wells have taken in as much as 1,200 feet of oil and gas section underlying the anhydrite. The oil discovery well at Rodessa has more than 480 feet of oil and gas and at bottom had not gone out of the showings.

So far no tests have drilled through the Trinity in the district. The lower Trinity red beds underlying the lower Glen Rose has stopped all drilling to date. These beds have generally been considered nonmarine in character and in view of little deep drilling done no particular attention has been given toward exploiting the possibilities of sands underlying these beds. Indications there might be something in the lower Trinity were given in two wells, Dixie Oil Co.'s No. 92 Dillon at Pine Island and Magnolia Petroleum Co.'s No. 1 McCook-Hibbler at Cotton Valley. These wells are believed the deepest tests stratigraphically ever drilled in the district, both are believed to have gone through the lower Trinity red beds and to have topped a possible lower Trinity sand section. The former, which topped the anhydrite at 2,486 feet, the Oolitic lime section around 2,900 feet, the lower Trinity red beds around 3,900 feet, drilled to a total depth of 6,331 feet where it topped a sand showing some oil and gas but which never was productive. The well was plugged back and made a small gasser in the anhydrite section.

Magnolia's well at Cotton Valley was drilled to a total depth of 7,006 feet in the lower Trinity red series and at that depth was reported to have found a sandy condition showing gas. The test was abandoned. That both of these tests may have reached the bottom of the red series and were about to enter a sand section in the base of the Trinity is the belief of some. That both had showings when they quit leads to the assumption there are oil and gas potentialities in the extreme lower Trinity.

It is of particular importance in respect to the approaching deeper drilling program expected for the district that the deeper the horizans the greater the structures. Frequently, the shallower formations give little evidence of structure although in lower formations underlying them the structure is sharp and well defined. This is probably due to the fact the greatest movement on the Sabine Uplift occurred during or just after the deposition of the older formations, and are not reflected in the younger formations.

Driller's Log, Oil Discovery Well at Rodessa

United Gas Public Service Co.'s No. 1, I. L. Young

Location 1,339 feet N and 549 feet feet W of SE cor. Section 21-23n-16w, Caddo Parish, Louisiana. Elevation, 209.13 ft. Total depth, 6,048 feet. Initial production 116 bbls. in 1 hour, one-half inch T.C.; T.B. pressure, 715 pounds; casing pressure, 1,100 pounds. Began April 24, 1935; completed July 24, 1935. Casing record: 16-inch at 212 feet, 10¾-inch at 2,098 feet, 7-inch at 5,594 feet.

55	Sand and clay	4,160	Shale and lime	5,583	Lime
125	Shale and sand	4,244	Red shale	5,591	Anhydrite and shale
200	Shale and boulders	4,274	Shale	5,620	Anhydrite
281	Shale	4,284	Lime	5,643	Shale streaks lime
550	Shale and boulders	4,374	Lime and shale	5,656	Shale and lime
553	Rock	4,412	Lime	5,657	Sandy shale
610	Shale	4,459	Shale and lime	5,661	Sand
823	Shale and boulders	4,489	Lime	5,679	Sand and shale
1,467	Shale and boulders	4,516	Shale and lime	5,696	Lime and sand
1,665	Lime and sand	4,541	Shale	5,709	Shale and lime
1,848	Shale	4,573	Shale and lime	5,728	Shale lime streaks
1,933	Shale streaks lime	4,591	Lime	5,736	Anhydrite and shale
2,028	Shale streaks chalk	4,628	Lime and sandy shale	5,754	Lime and anhydrite
2,060	Chalk rock	4,651	Lime and gummy shale	5,758	Lime
2,100	Chalk hard	4,676	Hard shale and lime	5,772	Lime and shale
2,140	Chalk rock	4,756	Shale and lime	5,790	Lime
2,485	Chalk	4,794	Broken lime and shale	5,808	Oolitic lime
2,566	Shale	4,836	Shale and lime	5,826	Lime
2,656	Shale streaks lime	4,852	Lime	5,843	Lime and shale
2,796	Lime and shale	4,884	Broken lime	5,854	Shale
3,026	Shale streaks lime	4,992	Shale and lime	5,904	Lime
3,028	Shale	4,995	Shale	5,911	Lime and shale
3,065	Lime	5,011	Anhydrite	5,914	Lime
3,116	Shale streaks lime	5,042	Shale streaks anhydrite	5,920	Sand
3,208	Lime	5,102	Shale and anhydrite	5,922	Core no log
3,258	Lime streaks shale	5,118	Lime and anhydrite	5,927	Sand
3,356	Lime	5,239	Shale and lime	5,937	Lime and shale
3,360	Gummy shale red	5,263	Lime and shale	5,940	Lime
3,532	Red gummy shale	5,288	Shale and anhydrite	5,958	Honeycomb lime
3,603	Lime sand and shale	5,327	Shale	5,976	Lime
3,693	Shale	5,389	Anhydrite	5,979	Shale
3,732	Hard lime	5,435	Anhydrite and shale	5,999	Sandy lime
3,972	Lime	5,477	Anhydrite	6,009	Lime and shale
4,002	Shale and lime	5,498	Anhydrite streaks shale	6,012	Shale
4,024	Lime	5,519	Anhydrite	6,020	Lime
4,049	Lime	5,523	Shale	6,028	Lime and shale
4,075	Lime and shale	5,542	Shale streaks anhydrite	6,030	Limey shale
4,125	Shale streaks lime	5,577	Shale streaks lime	6,048	Shale

Proration Rules For Rodessa Explained by Doctor Shaw

SHREVEPORT, La., Aug. 12.—Proration in the Rodessa oil field will be based upon a 40-acre maximum and a 5-acre minimum, it was announced here by Dr. J. A. Shaw of New Orleans, director of the minerals division, State Department of Conservation.

Allowables will be figured from a 75 per cent acreage and 25 per cent potential production base.

In explaining his statement Dr. Shaw said that no matter how large a tract of land a well is drilled upon it may produce only as much as those drilled on 40-acre units. Similarly, wells drilled on tracts of less than 5 acres will be allowed the same production as those drilled on 5-acre tracts.

This, the official stated, is designed to protect small producers, in that large acreage holders will be curtailed from overproduction from individual wells.

He said the department would issue drilling permits without limitation. All wells will be tested on a standard one-half inch choke for the basis of determining allowables.

Senator Connally Introduces New Bill Omitting Federal Control Section

By HUGH D. MALLON

SENATOR CONNALLY TUESday introduced in the Senate a substitute bill, in the form of an amendment to the Thomas bill, which would ratify the interstate compact, make permanent the Connally law, and limit imports to the daily average during the last six months of 1932. The provisions of the Thomas bill setting up an oil board, permitting voluntary trade agreements within the industry and creating a petroleum advisory committee were dropped.

These changes were made with the consent of Senator Thomas, and are designed to meet objections to the original bill which have been raised by members of the industry. All factions within the oil industry are willing to take the bill as Senator Connally has amended it. Due to the short time before adjournment it has become essential that the bill must have almost unanimous approval if it is to pass.

Representative Cole, chairman of the oil subcommittee in the House, is opposed to the amended version of the bill, and has signified his intention of continuing with consideration in the House of the bill as introduced by him.

Senator Connally, in introducing his substitute, said, "The interstate compact entered into by the oil states on February 16, 1935, should be adopted by Congress in order to make it effective. It is hoped that through the compact the oil states may work out plans for orderly production and development.

"Since it is inequitable to permit unrestricted imports of petroleum while domestic producers are prorated or restricted in production, the substitute bill which I have introduced provides for the regulation and control of imports in relation to the domestic supply. It is also believed that the so-called Connally act prohibiting interstate shipment of illegally produced oil should be made permanent. My substitute bill covers the above situations and it is believed will be approved substantially by those interested in the petroleum industry. Under the bill there is no semblance of federal control of production within any state.

"The powers of the states are preserved except in so far as they may be affected by the interstate compact entered into by the oil states. I am opposed to the provision of the Thomas bill exempting from the antitrust laws so-called 'industrial agreements' made by oil companies or others engaged in the production, refining, or importation of petroleum. For this reason my substitute strikes out the antitrust exemption and the allowance of industrial agreements. It is believed that the bill will receive general approval."

Proponents of strict federal regulation for oil have intimated that they will not object to whatever legislation is considered at this session of Congress, but are already training their guns on expanding any oil legislation passed at this time when Congress convenes next January. It is their intention to press for what is termed "more comprehensive legislation" next session, stating that the pending bills are the opening wedge in federal regulation of the oil business.

This conclusion was reached following the introduction of the Cole bill in the House and of the amended Thomas bill in the Senate, the Thomas bill adding to the Cole bill a clause authorizing the President at his discretion to transfer the proposed Petroleum Administrative Board to any department (presumably that of Secretary Ickes) and providing for an advisory committee from the industry as a successor to the Planning and Coordination Committee.

The conflict between the House and Senate bill threatened to defeat any legislation until the President sent a message to Congress recommending only acceptance of the interstate compact.

The President's message follows:

"I transmit herewith a certified copy of the State Compact to conserve oil and gas, executed in the city of Dallas, Tex., February 16, 1935, by the representatives of the States of Oklahoma, Texas, California and New Mexico, and recommended for ratification by representatives of the States of Arkansas, Colorado, Illinois, Kansas and Michigan. The compact signed by representatives of these states has been deposited in the Department of State of the United States.

"I also transmit a report of the Secretary of State, from which you will observe that notification has been received by the Department of State of the ratification of the compact by the legislatures of the States of New Mexico, Kansas, Oklahoma, Illinois, Colorado and Texas.

"I recommend that the Congress enact legislation giving the consent of Congress to the State Compact to conserve oil and gas, executed at Dallas, Tex., on February 16, 1935."

Governor Allred and other Texas state officials have registered protests against creation of a federal board, and in conjunction with others insists that the federal Government keep its hands off state production, and that the Secretary of the Interior be removed entirely from the picture.

The House had been waiting for the Senate to act on oil and had not yet received the bill by Cole of Maryland from the House Interstate and Foreign Commerce Committee, to which it was referred following introduction. The Cole bill provides for a board and for voluntary agreements, but not creation of an advisory board from the industry. Unless the House comes to the Senate's terms it can be said there will be no oil legislation during this session of Congress.

Texas Gas Law Is Sustained by Federal, State Courts

AUSTIN, Tex., Aug. 12.—A three-judge federal court has handed down its opinion, upholding the validity of the orders promulgated by the Railroad Commission of Texas regulating the production of natural gas from the Agua Dulce gas field in Nueces County.

Suit was filed by the Clymore Production Co., producing certain gas wells in the Agua Dulce Field and operating a refinery and stripping plant, to restrain the commission from interfering with its production of this gas and stripping the gasoline content therefrom and popping the residue or tail gas into the air.

The record made at the hearing at New Orleans dislcosed that the Clymore Production Co. produced approximately 78,000 feet of natural gas from these wells to 1 bbl. of water white distillate or condensate or drip gasoline. It was the contention of complainants in this cause that this water white distillate was crude petroleum oil and that their wells were oil wells and not gas wells, and that the order of the commission under attack in this suit was unconstitutional and void in that they attempted to classify their wells as gas wells in the face of the definition in the recently enacted gas bill, known as H.B. 266. The definition of a gas well contained in this act is that any well which produces 1 bbl. of crude petroleum oil to a ratio of 100,000 feet of gas shall be classified as an oil well and not as a gas well.

The attorney general's department defended this suit for the commission before the three-judge court at New Orleans on July 29 and 30. The attorney general offered in evidence at this hearing documentary evidence and other proof to the effect that the product collected in the separators on these wells was not crude petroleum oil but was drip gasoline or condensate, and that these wells did not produce oil, and that it was necessary to process the gas before this condensate could be extracted therefrom.

The contentions of the attorney general were sustained and upheld by the court in its opinion. The court held that all orders of the commission were presumptively valid and that the burden was on those attacking them to overcome this presumption of validity by clear and convincing proof.

Associate Justice M. B. Blair of the Third Court of Civil Appeals has granted a temporary order restraining the Cargray Corp., Hagy, Harrington & Marsh and American Natural Gasoline Co. from producing natural gasoline from their wells in the Panhandle Field in excess of the allowable fixed by the Railroad Commission order, and these concerns were further enjoined and restrained by this court from stripping the natural gasoline content from any portion of said gas so produced and permitting the residue or tail gas to be blown into the air. The petition for temporary injunction was set for hearing next Wednesday.

On Wednesday Judge Harry Dolan of Georgetown, sitting for Judge J. D. Moore of the Ninety-Eighth District Court of Travis County, had granted a temporary injunction in favor of Cargray Corp., Hagy, Harrington & Marsh and American Natural Gasoline Co. restraining the Railroad Commission from enforcing the provisions of the new gas laws and the Railroad Commission order.

As a result of the appellate court action, the commission was empowered to continue enforcement of provisions prohibiting popping into the air of residue gas stripped of its gasoline content.

Pits Holding Confiscated Oil to Be Destroyed as Emptied

AUSTIN, Tex., Aug. 12.—Assistant Attorney General W. J. Holt obtained a judgment against 372,420 bbls. of oil in an earthen storage pit in Rusk County. District Judge J. D. Moore ordered the oil sold at public auction.

The judgment provided for a receiver to take charge of the oil, and to see that no oil is run into or out of the pit. The receiver is also authorized to superintend processing the oil, as the petition of the state alleged that the oil was in such condition as to be unmarketable and it is necessary for it to be processed, there being a large amount of water and waste oil and pit bottom oil in this tank. The judgment also ordered that the receiver see the earthen pit be destroyed after it is emptied, and rendered inaccessible for future storage.

Attorney General McCraw has been authorized to destroy 36 pits and is expecting more will be added. Last week the Travis County District Court granted an order for confiscation of 450,000 bbls. in the second largest earthen pit in East Texas, which pit is to be destroyed. This is at Gladewater.

Editor Hazlett Dies

CASPER, Wyo., Aug. 12.—Andrew Jackson Hazlett, 70, dean of oil writers, publisher and editor of the Inland Oil Index, died quietly in sleep at his home early this morning. He had been ill for the past two years with cancer. He is survived by the widow, Sallie Locke Hazlett, a son, R. L., Casper, a daughter, Mrs. D. D. Dellinger, Dallas, Tex., and a brother, Harry Benton, of Ohio.

Natural Gasoline Stocks Decreased in June But Production Unchanged

The decline in the production of natural gasoline, which began in February, was interrupted in June, 1935, according to a report prepared by the Bureau of Mines, Department of the Interior. The daily average output in June was 4,212,000 gallons, compared with an average of 4,179,000 gallons in May and with 3,970,000 gallons a year ago. Production in the Panhandle declined, that in Oklahoma remained virtually unchanged, but most of the major fields in California recorded increases. In June as in May, stocks of natural gasoline at refineries declined and stocks at plants and terminals increased: however, the net change in June was downward whereas May total stocks increased.

Exports of natural gasoline increased from 9,911,000 gallons in May to 13,436,000 gallons in June. Direct shipments, that is, the movement to other than refineries also increased, the total for such deliveries rising from 9,007,000 gallons in May to 10,759,000 gallons in June.

Because of seasonal influences the trend in vapor pressures was downward, the average for refinery deliveries decreasing from 19.7 pounds in May to 19.0 pounds in June, the average for "direct" sales declining from 15.5 pounds in May to 14.1 pounds in June.

(Thousands of gallons)

	Production				Stocks			
					June 30, 1935		May 31, 1935	
	June, 1935	May, 1935	Jan.-June 1935	Jan.-June 1934	At refineries	At plants and terminals	At refineries	At plants and terminals
East Coast	.....	.....	.....	.....	**9,954**	.....	**10,962**	.....
Appalachian	**3,896**	**4,943**	**33,274**	**30,000**	**210**	**4,850**	**232**	**5,136**
Ill., Mich. and Ky.	**697**	**757**	**4,917**	**4,000**	**1,302**	**282**	**1,764**	**489**
Oklahoma	**29,739**	**30,892**	**178,483**	**178,600**	**2,856**	**25,611**	**3,780**	**21,222**
Oklahoma City	8,521	8,999	53,559	52,100	(*)	5,360	(*)	4,121
Osage County	3,727	3,898	22,785	21,100	(*)	8,320	(*)	6,896
Seminole	3,390	3,294	46,709	43,300	(*)	5,436	(*)	4,915
Rest of State	9,101	9,701	55,430	62,100	(*)	6,495	(*)	5,290
Kansas	**2,414**	**2,497**	**15,749**	**13,200**	**168**	**1,810**	**210**	**1,614**
Texas	**41,795**	**43,154**	**250,821**	**213,900**	**10,710**	**70,972**	**9,744**	**67,025**
Gulf	2,101	2,153	13,311	(†)	10,458	19,273	9,408	22,005
East Texas	6,801	6,005	32,493	17,200	(*)	692	(*)	587
Panhandle	22,258	24,056	140,881	116,900	(*)	44,953	(*)	39,408
North Texas	1,880	2,045	12,146	10,600	(*)	1,312	(*)	1,115
West Central	6,258	6,503	37,803	43,500	(*)	3,990	(*)	3,312
Rest of State	2,497	2,392	14,187	25,700	(*)	752	(*)	598
Louisiana	**3,664**	**3,828**	**22,305**	**20,500**	**84**	**6,914**	.....	**7,866**
Arkansas	**1,138**	**1,159**	**6,546**	**6,400**	**84**	**171**	**126**	**194**
Rocky Mountain	**4,158**	**4,172**	**25,678**	**28,300**	**2,058**	**1,411**	**1,260**	**1,368**
California	**38,848**	**38,159**	**243,884**	**240,500**	**103,026**	**3,250**	**114,618**	**3,413**
Huntington Beach	3,360	3,097	18,704	18,400	(*)	(*)	(*)	(*)
Kettleman Hills	8,650	9,124	72,156	69,700	(*)	(*)	(*)	(*)
Long Beach	6,724	6,744	38,549	37,500	(*)	(*)	(*)	(*)
Santa Fe Springs	4,268	4,491	27,148	31,400	(*)	(*)	(*)	(*)
Ventura Avenue	3,575	3,566	21,632	21,700	(*)	(*)	(*)	(*)
Rest of State	12,271	11,197	65,695	61,800	(*)	(*)	(*)	(*)
Total	**126,349**	**129,561**	**781,655**	**735,400**	**130,452**	**115,289**	**142,716**	**108,321**
Daily average	**4,212**	**4,179**	**4,319**	**4,060**	.....	.....	.....	.....
Total (thous. of bbls.)	**3,008**	**3,085**	**18,610**	**17,509**	**3,106**	**27,45**	**3,398**	**2,579**
Daily average	**100**	**100**	**103**	**98**	.....	.....	.....	.....

*Not available. †Included under "Rest of State."

RECEIPTS AND DELIVERIES OF NATURAL GASOLINE, JUNE, 1935

(Thousands of gallons)

	Deliveries				Receipts		
	To refineries	To refinery-owned bulk plants	To jobbers and retailers	Exports	At refineries	At refinery-owned bulk plants	By jobbers and retailers
East Coast	.....	.....	.....	.....	**2,725**	**17**	**15**
Appalachian	**2,219**	**589**	**1,260**	**256**	**1,031**	**377**	**700**
Ind., Ill., Ky., etc.	**644**	**2**	**293**	.....	**11,784**	**458**	**1,455**
Oklahoma	**23,345**	**758**	**1,150**	**96**	**14,984**	**225**	**778**
Kans., Mo., etc.	**2,111**	**72**	**34**	.....	**5,909**	**362**	**440**
Texas Inland	**20,215**	**260**	**1,706**	**121**)			
Texas Gulf	**4,177**	.....	.....	**6,645** §	**16,218**	**138**	**1,057**
Louisiana and Arkansas	**2,321**	.....	**1,024**	**3,710**	**2,328**	.....	**974**
Rocky Mountain	**3,648**	**7**	**84**	.....	**2,701**	**52**	**132**
California	**32,805**	.....	**3,579**	**2,608**	**32,805**	.....	**3,579**
Total	**91,485**	**1,629**	**9,130**	**13,436**	**91,485**	**1,629**	**9,130**
Daily average	**3,050**	**54**	**304**	**448**	**3,050**	**54**	**304**
Total (thous. of bbls.)	**2,178**	**39**	**217**	**320**	**2,178**	**39**	**217**
Average V.P.	**19.0**	**12.2**	**14.5**	**19.1**	**19.0**	**12.2**	**14.5**

DETAIL OF SHIPMENTS TO JOBBERS, RETAILERS, AND REFINERY-OWNED BULK PLANTS, JUNE, 1935

(Thousands of gallons)

	Point of receipt							
Point of delivery—	Texas	Oklahoma	W. Va.	Arkansas	Ohio	Louisiana	Other	Total
Oklahoma	**65**	**956**	.....	**16**	**4**	**33**	**834**	**1,908**
Texas	**1,096**	.....	.....	.....	.....	**57**	**754**	**1,907**
West Virginia	.....	.....	**624**	.....	**65**	.....	**525**	**1,214**
Arkansas	.....	.....	.....	**546**	.....	**56**	**8**	**610**
Louisiana	**34**	**122**	.....	**32**	.....	**218**	**8**	**414**
Ohio	.....	.....	.....	.....	**272**	.....	**89**	**361**
Other	.....	**12**	**8**	.....	**98**	.....	**4,227**	**4,345**
Total	**1,195**	**1,090**	**632**	**594**	**439**	**364**	**6,445**	**10,759**

Overproduction in East Texas Estimated at 45,000 Bbls.

FORT WORTH, Tex., Aug. 12.—Overproduction in the East Texas Field is estimated around 45,000 bbls. per day, according to field men who are closely in touch with the situation. Confiscated oil and by-products is causing considerable trouble, more trouble each week as operators ask for confiscation of products in pits so they can move them within the State. The Railroad Commission has ordered that all confiscated oil be placed in steel storage, gauges made and samples taken. Tenders are being issued for the amount given in court papers ordering the confiscation but only that amount shown to be actually in the pits will be allowed to move. When purchasers begin taking oil from the pits a commission agent is stationed at the pit and another at the steel tank to which it is being dumped, such movement being made only during the daytime.

Major companies have been offering steel storage space for storage of pit oil.

The following amounts of pit oil have been ordered confiscated and sold by the State: 90,000 bbls. in Gregg County; 8,000 bbls. in another pit and 53,000 bbls. in another pit, both in the same county; 34,345 bbls. in Smith County, 47,948 bbls. in Rusk County and another Gregg County batch of 43,822 bbls.

The Railroad Commission has set up a 37 per cent gasoline recovery with 2 per cent refinery loss as applying to skimming plants and 56 per cent gasoline recovery and 10 per cent refinery loss as applying to cracking units in computing recoveries by East Texas refineries from East Texas crude.

The attorney general's department has ruled that the Railroad Commission cannot suspend action on applications for permits to drill exception locations to Spacing Rule 37, because of the rehearing of the Brown vs. Humble Oil & Refining Co. case ruled on by the Texas Supreme Court. The commission had announced it would withhold final action on all applications for exceptions pending action of the Texas Supreme Court on the motion for rehearing. The Supreme Court is not expected to meet until October.

Assistant Attorney General Gray pointed out that "the judgment rendered by the Supreme Court was a final judgment from the date of its entry. The fact that a motion for a rehearing was filed and is now pending does not disturb the finality of the judgment. All parties affected are bound by the law therein announced. The motion for a new trial does not disturb the finality. The only order the commission can make at this time with respect to the court decision is one which would comply with provisions of the decision of the Supreme Court, irrespective of any motion for rehearing that might have been filed and is now pending before that court in this case."

Locations in the field have fallen to about half the number reported each week previous to the Supreme Court decision. There were only 62 staked in the field this week, which is about the average since the ruling was made.

The commission is installing a new accounting system at its Kilgore office following the hearing of the Legislative Investigation Committee which brought out the fact that the commission's past system was not any too efficient and should be corrected.

WEEKLY TANK CAR SHIPMENT REPORT

Week ending 12:01 a.m. August 4, 1935

	Cars	Gallons
Gasoline	542	4,385,344
Fuel oil	209	1,972,689
Residuum	11	89,071
Distillate	81	657,381
Casinghead gasoline	179	1,514,790
Gas oil	39	325,631
Kerosene	38	310,359
Naphtha	16	129,761
Butane	4	40,056
Crude oil	141	1,276,862
Total	1,260	10,701,944

Shipped under state and federal tenders:	No. cars
Interstate	481
Intrastate	79
Coastwise	335
Shipped under state tenders only:	
Intrastate movement	356
Shipped under injunction:	
Intrastate movement	9
Total	1,260

Confiscated Oil Sale Stopped by Court Injunction

FORT WORTH, Tex., Aug. 12.—Judge H. F. Kirby of the Seventy-Seventh District Court has granted a temporary injunction restraining the Sheriff of Rusk County from selling 450,000 bbls. of oil on a judgment and execution issued by the District Court of Rusk County on petition of Attorney General William McCraw.

The defendants named in the restraining order are W. L. McMurray, sheriff of Rusk County; William McCraw, Attorney General of Texas; E. O. Thompson, C. V. Terrell and Lon A. Smith, Railroad Commissioners, and J. I. Dyer of Overton, Rusk County. Meyer J. Rachofsky had been appointed by the court as receiver to hold and conserve the oil pending its sale by the sheriff.

The petition alleges that plaintiff, W. H. McDonald of Eastland County, brings this suit to protect his oil business and as a taxpayer of this state. He further alleges this oil will be sold for 65 cents a barrel when it is worth $1 and will bring that amount.

On July 31, the petition alleges, the Attorney General obtained a judgment for the state against Gilliland Refining and J. K. Murphey of Gregg County for the confiscation of 450,000 bbls. of oil and refined products.

The temporary writ was made returnable August 23 at 10 a.m.

Improvement From Demand Checked by Excessive Gain in Production

By C. O. WILLSON

THE JUNE REPORT OF THE Bureau of Mines when considered with weekly data since available, points to a continuance of conditions in which the improvement expected from a satisfactory increase in demand is being partially nullified by an excessive increase in the production of crude. The June domestic production averaged 2,744,600 bbls. daily, a gain of 84,800 bbls. daily over May and 76,600 bbls. daily over June, 1934. It was the largest monthly production since August, 1933.

Statisticians who lean to the bullish side have been quick to point out that while this production represents a peak monthly total since the oil code got under way in 1933, all of the production was absorbed with a reduction of 3,802,000 bbls. in stocks of refinable crude. This is the largest monthly withdrawal of the year. This reduction in crude inventories amounting to 127,000 bbls. daily, coupled with crude imports of 94,900 bbls., all of which were also absorbed, points to a total crude demand for the month of 2,966,500 bbls. daily. This is close to the all-time peak daily demand. Weekly reports from Washington have shown continued withdrawals since the end of June so that stocks of refinable crude oil are now the lowest since 1927.

These reports show an amazing absorption of increased crude production by domestic outlets aided in a small way with an increased foreign demand for raw materials produced in this country. It is assumed by some that the latest report points to a large increase in the demand for the products which was only partially anticipated earlier in the year and that the industry can look forward to a continuance of this development on a permanent basis.

These data on supply and demand are not so convincing, particularly to those charged with the responsibility of selling refined products to wholesalers and consumers. These sellers have not lacked supplies and the bureau's accumulative data as summarized for the first six months in the accompanying table reflect the fact that the actual demand in most cases could have been satisfied with a substantially smaller current output.

In regard to refinery operations the June figures show only minor changes in conditions apparent in earlier monthly reports. The domestic gasoline demand was 4 per cent ahead of June, 1934, practically the same as the gain for the first half year. Thus the six months total points to a new yearly peak in domestic demand.

There was an unexpected gain in motor fuel exports in June over May and June, 1934, and this reduced the decrease for the first half of 1935 compared with same period in 1934. With only a 2.9 per cent decline in motor fuel exports the total demand (domestic demand plus exports) is running 3.4 per cent ahead of last year. If this relationship continues over the last half year, the total motor fuel demand for 1935 will be within 1 or 2 per cent of the 1930 peak.

However, refiners are pushing this increased demand for all it is worth and possibly more than it is worth, on the supply side so that market weakness has been apparent at a few points during the past few weeks with the threat of more general trouble at the end of the season of greatest consumption. This situation is readily apparent from the six months reports which show that an increase of 6,981,000 bbls. in total demand for motor fuels has been more than offset with an increase of 14,729,000 bbls. in total supply.

Largely the same situation applies in other

Crude Oil and Refinery Situation Summarized—First Six Months

Supply and Demand—Crude Oil (Bbls.)

First six months—	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Indicated domestic demand‡	Exports	Stocks refinable crude June 30
1935	491,587,000	494,084,000	2,497,000	.5	476,185,000	15,402,000	471,652,000	22,432,000	334,757,000
1934	466,353,000	464,426,000	*1,927,000	*.4	448,680,000	17,673,000	445,584,000	18,842,000	357,239,000
Increase, 1935	25,234,000	29,658,000	.....	....	27,505,000	†2,271,000	26,068,000	3,590,000	†22,582,000
Increase, 1935	5.4%	6.3%	.....	.....	6.1%	†12.8%	5.8%	19.1%	†6.3%

Supply and Demand—Refinery Products—Motor Fuels (Bbls.)

First six months—	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks June 30§
1935	219,582,000	212,337,000	*17,245,000	*8.5	219,562,000	20,000	199,540,000	12,797,000	58,992,000
1934	204,853,000	205,356,000	503,000	.25	204,852,000	1,000	192,164,000	13,192,000	58,891,000
Increase, 1935	14,729,000	6,981,000	.....	....	14,710,000	19,000	7,376,000	†395,000	101,000
Increase, 1935	7.2%	3.4%	.....	....	7.1%	.....	3.8%	†2.9%	.2%
Kerosene									
1935	28,233,000	26,321,000	*1,912,000	*7.2	28,233,000	.....	22,919,000	3,402,000	8,310,000
1934	26,445,000	26,667,000	222,000	.8	26,445,000	.....	21,865,000	4,802,000	6,335,000
Increase, 1935	1,788,000	†346,000	.....	....	1,788,000	.....	1,054,000	†1,400,000	1,975,000
Increase, 1935	6.7%	†1.3%	.....	....	6.7%	.....	4.8%	†29.1%	31.2%
Gas Oil and Fuel Oil									
1935	178,865,000	185,588,000	6,723,000	3.7	167,979,000	10,886,000	173,755,000	11,833,000	103,674,000
1934	171,315,000	184,942,000	13,627,000	7.9	164,562,000	6,753,000	171,004,000	13,938,000	109,377,000
Increase, 1935	7,550,000	646,000	.....	....	3,417,000	4,133,000	2,751,000	†2,105,000	†5,703,000
Increase, 1935	4.4%	.3%	.....	....	2.1%	61.2%	1.6%	†15.1%	†5.2%
Lubricating Oil									
1935	13,402,000	13,878,000	476,000	3.5	13,402,000	.....	9,750,000	4,128,000	6,855,000
1934	13,325,000	13,603,000	278,000	2.0	13,325,000	.....	9,546,000	4,057,000	6,752,000
Increase, 1935	77,000	275,000	.....	....	77,000	.....	204,000	71,000	103,000
Increase, 1935	.5%	2.0%	.....	....	.5%	.....	2.1%	1.7%	1.5%
Petroleum Wax (Lbs.)									
1935	238,919,000	233,549,000	*5,370,000	*2.3	225,120,000	13,799,000	128,776,000	104,773,000	141,506,000
1934	276,543,000	237,289,000	*39,254,000	*12.3	250,320,000	26,223,000	139,476,000	97,813,000	108,087,000
Increase, 1935	†37,634,000	†3,740,000	.....	....	†25,200,000	†12,434,000	†10,700,000	6,960,000	33,419,000
Increase, 1935	†13.6%	†1.1%	.....	....	†10.0%	47.4%	†7.6%	7.1%	30.9%

*Excess supply. †Decrease. Note—Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments. ‡Crude oil only. §Includes finished refinery gasoline and natural gasoline. In addition there were 6,366,000 bbls. of unfinished gasoline on June 30, 1935, and 6,905,000 bbls. on June 30, 1934.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

First six months—	Total imports§	Total exports§	Total crude to stills	Nat. gasoline production	% Gasoline yield from crude oil‡	Total supply all oils*	Total demand all oils*	Stocks all oils June 30
1935	26,548,000	56,037,000	460,105,000	18,610,000	46.4	522,211,000	518,306,000	568,053,000
1934	24,584,000	55,963,000	435,664,000	17,509,000	46.1	491,678,000	504,083,000	589,808,000
Increase, 1935	1,964,000	74,000	24,441,000	1,101,000	.3	30,533,000	14,223,000	†19,755,000
Increase, 1935	7.9%	.1%	5.6%	6.3%	....	6.2%	2.7%	†3.4%

*Total all oils includes crude refined products, natural gasoline and benzol. †Decrease. ‡Includes natural gasoline blended at refineries. §Includes crude oil and refinery products. In case of gas oil and fuel oil and wax, imports includes only products for domestic use. All data based on Bureau of Mines reports.

products from the special naphthas to residual fuels including kerosene, various grade distillates and gas oil. The total supply of kerosene increased 6.7 per cent with a slight loss from last year in the total demand due to a substantial reduction in exports. The demand for fuel oil and gas oil was heavy in the early months of this year and there were large withdrawals from storage. In May and June this situation was reversed and in June the additions to storage were about equal to the reductions in crude inventories.

While the general figures of the bureau on lubricating oils show little change the first six months brought gradual weakness in the paraffin base oils and prices are lower than a year ago. The wax situation showed some improvement in June but is still laboring under an excess of supply.

There has been considerable discussion recently on the development which has brought a steady reduction in crude inventories during the past 90 days. It has been contended it is useless to set up production allocations based on month-to-month demand so long as individual companies drew on their stocks whenever they considered it desirable. It is said such action nullifies chance of recovery.

Certain economists argue too much stress is placed on above ground storage conditions in an industry which for several years has been dominated from the marketing angle by known underground crude oil reserves. They feel the steady yearly (except 1933) reduction in above ground stocks since 1929 is in line with changed conditions and the fact that the lowered inventories have not had direct reflection in market upturns is entirely logical.

Present stocks of refinable crude are 100,000,000 bbls. under the all-time high and total all oils approximately 135,000,000 bbls. under the peak of more than 700,000,000 bbls. Stocks of crude were reduced in 1930, 1931 and 1932 and credit was given to the voluntary efforts of the industry and the oil producing states. Disappointment was expressed at the time that the markets did not show permanent improvement, the conclusion being that the economic maxim that prices fluctuate with changes in supply and demand as reflected in stocks, was somewhat mythical in its application in the oil industry.

THOSE WHO STRESS THE other viewpoint contend these overlook that while inventories in tanks were being reduced the industry was adding greatly to field reserves. The industry was reducing its above ground storage and at the same time making much larger additions to its underground supplies and the latter became the controlling factor in the operations of most operating units and the industry as a whole. It is explained that a reduction in above ground storage has been a natural and inevitable result of the other development which saw new fields with an ultimate production ranging from 100,000,000 to 2,000,000,000 bbls. arbitrarily restricted by federal and state government regulations to a small percentage of their potentials.

The operating policy of constantly increasing crude stocks was common in earlier periods, due to the "feast or famine" method in which new fields operated without restrictions provided the feast followed by the famine when it was necessary to draw on steel storage accumulated during brief periods of excess production. There was the fear that a prolonged famine would materialize and the industry faced with a constantly increasing demand believed larger and larger stocks was its only protection. Prices fluctuated widely over part of this period and the incentive of speculative profit rarely realized after the high price period of 1920—was a factor in storage programs.

The "new era" which brought in a permanent "feast" according to these economists started in 1926 with Seminole when the industry backed by the Oklahoma state authorities hoping to reduce losses incidental to a period of low prices sought to restrict Seminole production to the available demand without cutting into the established outlets for older fields. This plan has continued primarily because new fields were brought with potentials far in excess of the month-to-month demand. Operators found these restrictions attractive from the standpoint of low cost operations. Conservation of gas and water pressures lengthened the natural flow of wells and added to the ultimate recovery of new fields.

The net result has been that most producing companies over the past four to six years have built up a large potential production which they expect to draw on over a period of one or more years and which will take care of their requirements even if they should not be successful in finding new supplies. Individual companies have pointed out this situation in their statements to stockholders explaining their current production is only a small percentage of their potential with large known reserves on which to draw over a period of years.

A steady withdrawal from storage was the logical result of this development which could not have been foreseen in any earlier period. Individual companies found they could not justify crude stocks of 25,000,000 to 50,000,000 bbls. in the case of major operators and 5,000,000 to 20,000,000 bbls. for the smaller concerns. This storage represented large investments on which there was no possible chance of profit through increases in prices for crude oil with substantial current charges in the form of evaporation losses, taxes and insurance amounting to as high as 20 cents per barrel yearly. Companies with their own production or connected with fields assured of a steady production over several years did not feel the need of crude in storage and have in some cases reduced these stocks more than 50 per cent.

The liquidation of these stocks in certain cases helped to provide funds needed to carry on additional exploration work which was successful in developing new reserves far in excess of the crude taken from storage.

With this situation in mind some students of marketing developments favor the continued liquidation of crude inventories. They hope it continues until the "working stock" minimum is obtained. At that point the industry will no longer be subject to the uncertainties of a situation in which producing, transportation and refining interests have crude stocks in excess of their actual requirements. Just what this minimum is for the entire industry no one has attempted to state. It is said certain companies have already reached that point. Large companies which directly or through subsidiaries or affiliated concerns must supply crude requirements of pipe line and refining systems ranging from 50,000 to 200,000 bbls. daily must have substantial crude in tanks to assure flow of oil from month to month regardless of how large their known reserves may be.

Conditions in this regard will vary widely with different companies depending not only on size but operating conditions. It will also fluctuate with changed conditions in the industry. Any extended period in which no new large supplies are found and the industry is pulling on its known reserves to supply current requirements, will cause operators to place more value on their storage in tanks.

That development was in the making during 1933 and 1934 when no new large fields were discovered and the industry was using more oil than it was finding with no danger, however, of an immediate shortage. It is now claimed this situation has again changed and the industry through new fields in the Mid-Continent and the Gulf Coast during the past six months has added more to its reserves than it has taken out. A case is cited in which one large company which has been fortunate in adding to its reserves has reduced its above-ground storage in recent months.

CONSTRUCTION NEWS

Michigan Refinery Work

MUSKEGON, Mich., Aug. 12.—Construction of two new independent refineries in Michigan, one at Carson City about 6 miles from the Crystal oil field and the other at Wayne near Detroit has been announced. Del Fortney, of Bay City, was elected president of the Carson City Refining Co., which will erect a 1,000-bbl. skimming plant to run Crystal crude. E. G. Guy, refinery engineer, to be in charge of construction, was named one of three vice presidents, the others being G. F. Pratt and J. G. Fleckenstein. M. A. Hagerman was named secretary-treasurer of the $65,000 corporation. Crude will be trucked from Crystal wells at the start with possibilities a pipe line to be laid later. The plant will adjoin the Grand Trunk railway.

The American Petro-Chemical Co., a $150,000 corporation, plans to start construction of a 500-bbl. plant at Wayne this month, it was announced by Arthur S. Hinch, vice president and general manager.

Old Dutch Refining Co., of Muskegon, which was just completing repairs after a $10,000 fire July 11, has started replacement of a $15,000 treating plant destroyed in a second fire last week. Refining operations were resumed within a few hours after each fire.

East Texas Installations

FORT WORTH, Tex., Aug. 12.—Danciger Refineries, Inc., plans to install a new cracking unit at its plant a couple of miles south of Longview, East Texas, on the L&G.N. Railroad. This will give the plant a daily crude capacity of around 6,000 bbls. per day. The plant has been shut down for several months but it is planned to start up as soon as modern equipment can be installed.

Cascade Refining Co. has installed a cracking unit at its plant southwest of Kilgore. The plant was formerly known as Model Refining Co., but is now owned by the Potter Brothers interests.

W. R. Skeen has purchased the Butler and Calhoun gathering system comprised of 12 miles of 4-inch line handling around 9,000 bbls. of oil per month in the East Texas Field.

Master Petroleum Co., of Waco, has purchased the Phoenix Refining Co.'s refinery just west of Dallas. This plant was purchased by Phoenix from Oriental Oil Co. a few months ago.

Admiral Refining Co. has erected three 10,000-bbl. tanks and is to build one 55,000-bbl. tank at its refinery in the East Texas Field.

Michigan Extensions

MUSKEGON, Mich., Aug. 12.—Two pipe line additions of about 3 miles each were to be laid in central Michigan this week, to serve two extension wells, one by Pure Transportation Co. to a well in Ferris Township, Montcalm County, from its Crystal gathering system and the other by Michigan Cities Natural Gas Co., of Mt. Pleasant, to a Sheridan Township, Mecosta County extension well about 3 miles north of the Broomfield Township, Isabella County gas field.

Pure Transportation Co. also announced immediate construction of a new $25,000 pumping station in the Crystal Field. Ten miles of new telephone and telegraph lines also will be erected to connect the Crystal area with the pipe line company's communication network throughout other central Michigan Fields.

Consumers Power Co. is rushing completion of a 30-mile extension of its gas main from the Broomfield Township Field into the Hinton and Millbrook Township gas area in Mecosta County where additional reserves will be made available for Midland, Bay City and Saginaw consumers. About $200,000 is being spent on this project with a gathering system being installed by Petroleum Transportation Co. formed by the producers in the Hinton-Millbrook and Belvidere-Montcalm area. The line is expected to be completed this month.

Construction of an 8 mile extension from present mains of Muskegon Gas Co. in Muskegon and Muskegon Heights will be started August 29, if the proposed new service to North Muskegon is approved by three-fifths of the voters in a special election August 28. The line is scheduled for completion about September 20.

PETROLIA, Ontario, Aug. 10.—Canadian Oil Companies, Ltd., is erecting a new brick and concrete office and laboratory building at its refining plant here.

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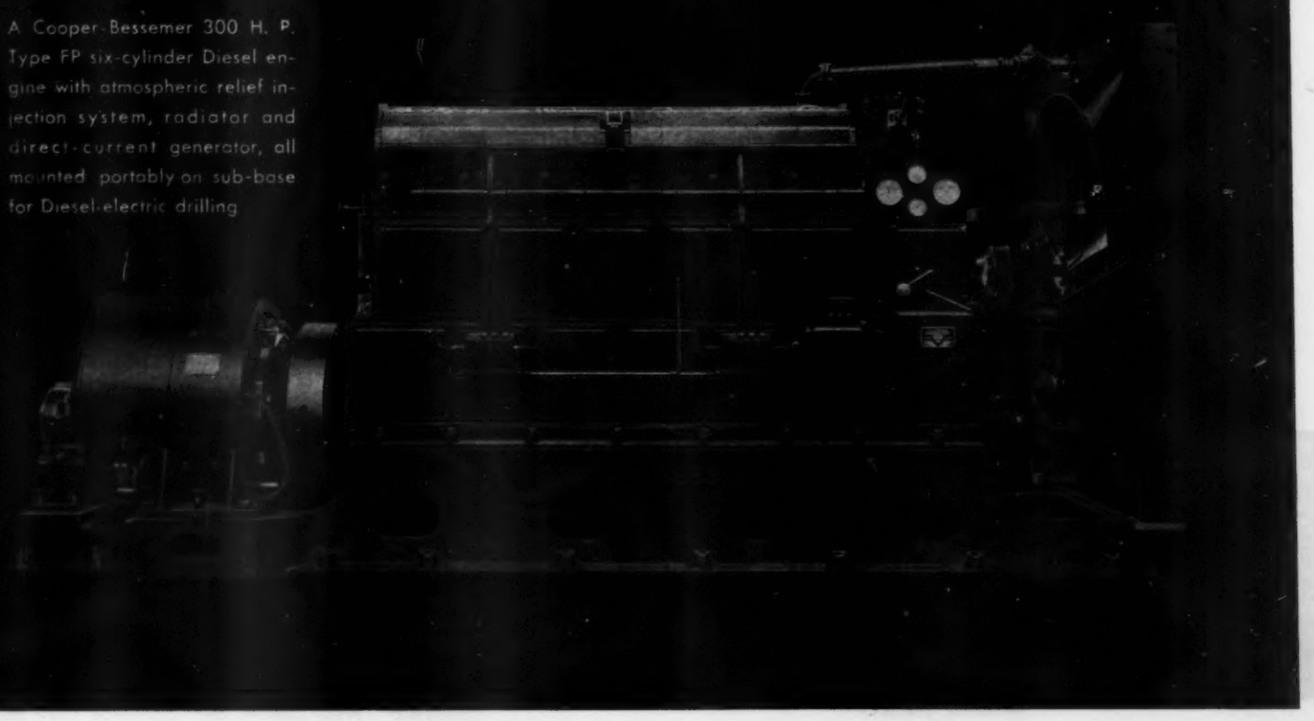

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Bulletin No. 78 sent on request

THE NATIONAL SUPPLY COMPANY

Palisades Section of Playa del Rey Is Passing Quickly Out of the Picture

By L. P. STOCKMAN

THE PALISADES SECTION of the Playa Del Rey Field of Los Angeles Basin is passing out of the production picture so fast that within another few months operators will have to resort to pumping equipment unless they use a little common sense and conserve the rapidly dwindling supply of natural gas left in the reservoir. Gas was being dissipated so flagrantly the state director of natural resources found it necessary to proceed with court action to halt the waste of gas and succeeded in getting an injunction prohibiting further undue waste for a period of 30 days. The court took no cognizance of gas-oil ratios in issuing the temporary injunction but based the order on the past performance of each well. Under this arrangement some wells will be allowed to produce more gas than others, although no well will be allowed to produce more than 950,000 feet of natural gas in any one day.

The injunction limits production of gas to not more than 18,000,000 feet per day, and since there is a demand for approximately 14,000,000 feet per day, there will be a permitted blow of about 4,000,000 feet. It is the expectation that within 30 days or shortly thereafter the supply of gas will have declined to such a point no further restraint will be required.

Approximately 30,000,000 feet of gas was being blown to the air at Playa Del Rey before the director of natural resources stepped into the picture and secured a temporary injunction. This action was instituted about two weeks ago, at which time the court issued a temporary restraining order and instructed Umpire Pemberton and R. D. Bush, state oil and gas supervisor to undertake a survey and report their recommendations to the court the following week. The temporary injunction became effective at noon August 8 and will continue in effect until September 8. As a result of gas waste in the Palisades section, bottom hole pressures showed substantial declines. During the period of unrestrained blow, bottom hole pressures were sliding off at the rate of 100 pounds per week, so it is quite apparent that the court considered the situation of an emergency nature.

The institution of litigation involving gas waste accomplished a lot of good from another angle because it permitted Umpire Pemberton to go on the various rigs and make certain necessary tests. The findings were unusually startling, although they bear out the contention of many that this field could not possibly make its potential, and further that the claim of strict curtailment was absolutely fictitious except in certain known cases. It also indicated this section of the Playa Del Rey Field would enter the pumper stage within 30 days if thrown open. Recognizing this situation, the Central Committee of California Operators, official curtailment committee, slashed the potential daily production of the field from 120,878 bbls. to 32,681 bbls., a drop of 88,197 bbls. This action should be a source of gratification to many who have consistently claimed Playa Del Rey was grossly overrated. Some other fields are in much the same situation, although not to the same extent.

Wilshire Oil Co. and its subsidiary, Ambassador Petroleum Co., secured a temporary restraining order from the Superior Court in Santa Ana prohibiting state officials from padlocking its wells and tanks in the Huntington Beach Field, and this case will be heard on August 12. The hearing on the appeal to make the injunction permanent will probably require several days if the company proceeds to sustain some of the charges that it has made. This action is the outcome of a move initiated last month by the State to force Wilshire Oil Co. to conform with curtailment in the operation of its wells producing from beneath state tidelands. On July 17 the State padlocked 18 wells of Wilshire and 1 of Ambassador because the wells in question had produced more than their assigned quota.

Several wells in the Semi-Tropic gas field of Kern County were opened early last week and will continue on commercial production for one month to determine the potential production of the field. About two months ago the Standard laid a temporary surface line connecting up with the main transmission line which moves the gas up through the San Joaquin Valley to the San Francisco Bay region. The wells now on production have been connected with the temporary installation and are on commercial production for the first time since discovery of the Semi-Tropic gas field a few months ago.

The potential test of Semi-Tropic will be watched with interest because it is probable if the field comes up to expectations it will be permitted to go on commercial production during winter. There is also a good possibility some of its gas may be moved to southern California as Southern California Gas Co. would no doubt lay the necessary connecting lines if sufficient gas could be guaranteed. Standard Oil Co. is in a very advantageous position with respect to gas production because of its one-half interest in one of the main gas transmission lines extending up to San Francisco. It has several hundred acres already proved up for gas at Semi-Tropic and Delano and can move some of it northward through this pipe line.

Capt. T. Rieber Chairman of the Texas Corporation

CAPT. T. RIEBER

NEW YORK, Aug. 12.—Capt. T. Rieber, who has been vice president in charge of the marine and export activities for several years, has been elected chairman of the board by directors of the Texas Corp., succeeding the late Judge C. B. Ames. Captain Rieber will continue to head the foreign and marine operations of the corporation in addition to his duties as chairman of the board.

Harry T. Klein, vice president and general counsel, was elected a member of the executive committee to take the place of Judge Ames. Henry U. Harris, partner in Harris, Upham & Co., New York, was elected a director. He is the son of J. F. Harris, who was an associate of John W. Gates in the organization of the Texas Co. W. S. S. Rodgers, president, continues as chief executive officer.

Captain Rieber, 53 years old, joined the Texas Co. in 1905. In 1909, at the age of 26, he was assigned to shore duty and since then has served in practically all branches of the business. He left the Texas Co. in 1919 to become associated with J. S. Cullinan, who had been one of the founders of the Texas Co., returning to the latter in 1927 to assume his position as head of the export and marine departments. He will continue in these latter activities in connection with his duties as chairman.

DEATHS

MRS. JOSEPH NEWTON PEW, widow of the founder of the Sun Oil Co., died August 10, at her home, "Glenmede," Bryn Mawr, Pa., after a long illness, in her eighty-sixth year.

Mrs. Pew (born Mary Anderson), was the daughter of Enoch Lucius Anderson and Rebecca Anderson. She was born at East Waterford, Juniata County, Pennsylvania, August 4, 1850. Her family was prominent in western Pensylvania, her father and one of her brothers, George K. Anderson, being leading figures in the development of Pennsylvania's oil resources, while her grandfather, Enoch Anderson, won a considerable fame through his services in the Revolutionary War. She was married to Mr. Pew at Titusville, Pa., December 17, 1874. To them were born five children: Arthur E. Pew, now deceased; J. Howard Pew, of Philadelphia, now president of the Sun Oil Co.; Joseph Newton Pew, Jr., now vice president of the Sun Oil Co.; M. Ethel Pew, of Philadelphia; and Mrs. Mabel Pew Myrin, of Bryn Mawr, Pa., and Cannes, France.

Mrs. Pew is survived by two sons, two daughters, ten grandchildren and seven great-grandchildren. Two of her grandchildren, Arthur E. Pew, Jr., and Walter C. Pew, are executive officers of the Sun Oil Co. Mr. Pew died October 10, 1912.

THOMAS F. CONNELLY, oil producer and chemical manufacturer, of Bradford, Pa., died Saturday, August 10, in St. Alexis Hospital in Cleveland, Ohio. He was 76 years old. He was the father of Ernest L. Connelly, secretary and treasurer of the Larkin Torpedo Co., Tulsa, and Don L. Connelly, manager of the land and geological division of the Indian Territory Illuminating Oil Co., Bartlesville, Okla. The former was with his father when he died and the younger son left for Bradford to attend the funeral. Mr. Connelly in his younger years with his brother, the latter the father of W. L. Connelly, chairman of the board of the Sinclair Prairie Oil Co., were boiler manufacturers under the firm name of Connelly Brothers.

the OIL AND GAS JOURNAL

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Texas Commission Should Enforce Law

One of the greatest burdens unjustly imposed upon producers in the East Texas Field has been the necessity of drilling unnecessary wells simply to insure themselves of an allowable sufficient to meet their requirements and to protect their properties as best they may from drainage by offset wells.

There are adequate laws in the State to correct this situation and these laws have been upheld by the Supreme Court of Texas. It is true a petition has been entered for a rehearing on that tribunal's decision on Rule 37 involving the spacing of wells and exceptions to that rule but the Attorney General's Department has rendered an opinion this action does not disturb the finality of the decision of the Supreme Court.

The Supreme Court of Texas has ruled that the Railroad Commission has the power to limit spacing of wells and, also, to prevent waste, has the power to limit the rate of flow in the same way that it has the power to limit spacing.

That court by unanimous decision on June 12 also stated "conditions may arise where it would be proper, right and just to grant exceptions to the rule so as to permit wells to be drilled on smaller tracts but in all such instances it is the duty of the Commission to adjust the allowable, based upon the potential production, so as to give the owner of such smaller tract only his just proportion of the oil and gas."

Despite the spacing rule allowing one well to 10 acres in East Texas, exceptions granted have lowered this average to about one well on 6.9 acres with one tract of 50 acres having one well to each seven-tenths-acre and another tract of 100 acres having one well to each acre. Each of these wells is prorated on the basis of potential only, which gives the owner of a well on less than one acre the same production as the owner of a well on 10 acres, if the potentials are the same.

The Supreme Court of Texas has stated the owner of a well on a tract less than 10 acres in East Texas is entitled only to his proportionate share of the allowable, based on potential and acreage. Obviously that decision is entirely fair and equitable to every producer and property owner. The court has stated it is the duty of the Railroad Commission to fix allowables on that basis.

Why does not the Railroad Commission of Texas carry out the instructions of the Supreme Court of that state and correct this injustice which has continued so long? The law is clear. The decision of the Supreme Court of Texas is comprehensive and states definitely the duty of the Railroad Commission. For two months the Railroad Commission has failed to carry out its duty as stated by the state's highest court and "hot" oil producers in East Texas are reported now as being convinced present proration orders of the Commission in East Texas are not valid. The Railroad Commission should immediately issue new orders carrying out the mandate of the Supreme Court of Texas.

Severe Setback to Control Idea

The oil legislation situation at Washington looks much better. The President's message, strictly limited to recommendation of approval of the interstate compact, disposed of fears that, after the White House conference, he might urge some form of Federal control of the industry.

The executive's statement was plainly a sharp disappointment to both Secretary Ickes and to proponents of any sort of Federal petroleum administrative board. They had hoped with a favorable word from the White House that the amended Thomas bill embodying the main provisions of the Cole bill and adding a clause authorizing the President to transfer the proposed board back to Secretary Ickes' department might get through.

The failure of the President to go that far was another illustration of the political acumen so often credited to him. He could not but know that the oil industry is solidly against Federal control, that the oil producing states represented at the Dallas conference and those who have since ratified the interstate compact promoted that compact to maintain state regulation and to avert Federal control.

He was not for a moment misled by the specious plea that a Federal administrative board is necessary to supervise the interstate compact. He knows, as everybody else knows, that if the states cannot make the compact work equitably and satisfactorily outside interference is not going to make it work.

The telegram which Governor Allred of Texas sent to him "trusting Congress will speedily approve the compact without appending any provisions which would tend in the slightest towards attempted Federal control in these matters vital and exclusive to the states" has been reflected in the consistent opposition of the Texas representatives in both houses of Congress.

The President's message recognized the situation as it is. Approval of the compact is the only oil legislation that appears to have a chance of getting through Congress at this session. The Cole committee bill and the amended Thomas bill with its possible return to Ickes are irreconcilable on that point.

The new bill introduced by Senator Connally approving the compact, limiting imports and extending the Connally act banning transportation of contraband oil is all that is needed.

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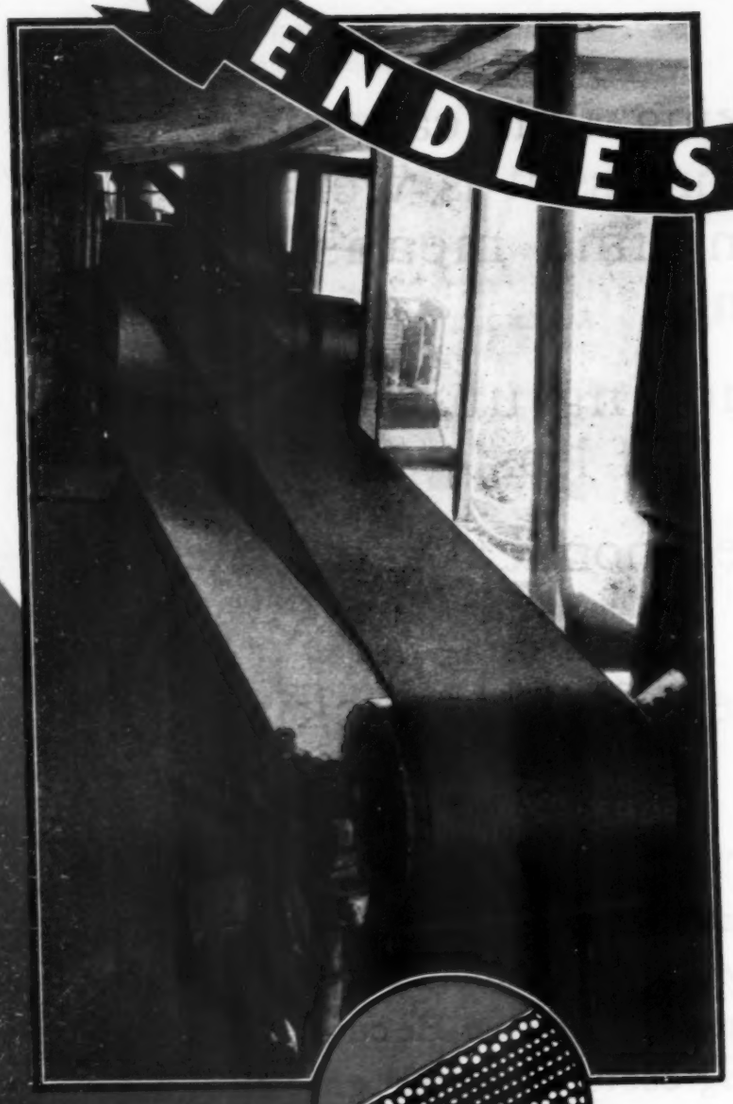

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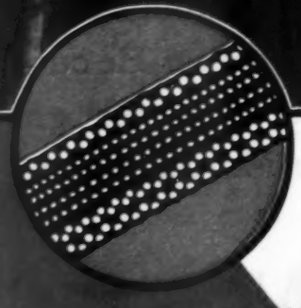

Cross section showing cords in rubber and the overlapped envelope.

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NEWS FROM FOREIGN LANDS

Venezuela

Crude oil production in the fields of Venezuela during July totaled 12,883,045 bbls., or 415,582 bbls. daily. This is a decrease from the 424,411 bbls. daily in June but is the second largest monthly average for the year and represents a gain of approximately 8 per cent over July, 1934.

For the first seven months of this year, Venezuelan crude oil production totaled 84,750,059 bbls., a gain of 9.6 per cent when compared with the 77,277,870 bbl. total for the same period in 1934. Production so far this year has shown a consistent gain from month to month over the corresponding months of last year.

Among the individual producing areas, Lagunillas in the lake section showed a substantial gain in July over June, the increases partially offsetting losses in other areas. The average daily production of that area was 225,880 bbls. in July and 199,357 bbls. in June. Three of the larger operators increased their production.

Production in the Quiriquire Field of Eastern Venezuela which has shown a greater gain than any other field over the past two years decreased slightly in July compared to June which established a new peak. No developments of special importance were reported in any of the fields. In the lake section there are a few new completions monthly and the number of old wells equipped for pumping or the gas lift is steadily increasing. It was reported that the Venezuelan Oil Concessions Ltd. is preparing to expand its drilling operations. The company's properties in the lake area are inland with proven properties which as yet have not been fully developed. In Eastern Venezuela, The Standard of Venezuela (Creole) is reported to have made a location in connection with its agreement to carry on exploration operations on the properties of the Pantepec Oil Co. The new location is in the State of Monagas about 20 miles southwest of the Quiriquire oil field. The following table summarizes the July operations:

PRODUCTION BY FIELDS

	July	
	1935	1934
Lagunillas	7,002,273	6,180,000
Quiriquire	1,796,146	1,288,400
La Rosa-Ambrosia	1,939,744	2,120,130
Mene Grande	1,263,900	1,302,200
Tarra	422,680	529,200
Cumarebo	264,562	311,730
Concepcion	122,970	145,600
El Mene	57,500	78,200
La Paz	13,270	21,140
Total	12,883,045	11,976,600
July (daily)	415,582	386,342
June	424,411	378,435
May	401,743	372,332
April	382,378	367,333
March	371,900	351,630
February	390,020	348,900
January	405,156	350,270
First six months	397,055	360,780

PRODUCTION BY COMPANIES

Lago Petroleum Corp.	3,882,619	3,969,900
Venezuelan Oil Concessions Ltd.	3,267,760	3,144,600
Creole Petroleum Corp.	2,542,586	1,815,200
Venezuelan Gulf Oil Co.	1,446,000	1,137,500
Caribbean Petroleum Co. Ltd.	1,263,900	1,302,200
Colon Oil Corp.	422,680	529,200
British Controlled Oilfields Ltd.	57,500	78,200
Total	12,883,045	11,976,600

Japan

Reports from Japan indicate that little progress is being made in the dispute between the Government and private oil interests in regard to regulations covering operations in that country. The main point of disagreement is that provision of the new Japanese regulation which requires that private companies keep six months supply of oil on hand at all times in addition to their working storage. It is further provided that this oil can be confiscated by the Government in time of national emergency at prices to be determined by the Government's representatives.

The principal foreign companies operating in Japan are the subsidiaries of the Standard-Vacuum Oil Co. and the Shell interests. They have refused to carry out the provision in regard to storage unless they are compensated in some way for the large expenditure and carrying charges. In this protest it is understood they have been joined in part by two or three of the companies owned and operated in Japan. It is estimated that minimum expenditure of $5,000,000 would be required to carry out the Government's program.

It is also said that the foreign and domestic oil companies are seeking higher prices on motor fuels and some of the other petroleum products. The Government arbitrarily has forced companies distributing in Japan to maintain low prices so that prices there are now much lower than any other place in the Orient resulting in losses in operations over the past year.

Argentina

The great expansion of Argentina's domestic petroleum refining industry is strikingly reflected in import statistics for the first quarter of this year covering refined products and crude oil, according to a report to the Commerce Department from Assistant Trade Commissioner D. C. Clark, Buenos Aires. Imports of gasoline in this period amounted to only 505,564 gallons compared with 4,725,658 gallons in the corresponding 1934 quarter, while the respective figures for kerosene were 147,055 gallons and 1,109,723 gallons.

Imports of crude petroleum into Argentina increased from 8,405 metric tons in the first three months of 1934 to 109,587 tons in the first quarter of the current year. Peru accounted for the bulk of Argentine imports in the 1935 quarter followed by the United States and Ecuador, statistics show. While fuel oil imports into Argentina have remained on approximately the same level, the report reveals, receipts of Diesel oil have shown an appreciable increase. Fuel oil arrivals, it is pointed out, are generally of a particular type and no marked changes are expected in this trade. Diesel oil imports, on the other hand, should increase progressively as the Diesel motor is now considered to be a most promising economical producer of power.

Up to now, the utilization of the Diesel motor in Argentina has been more or less experimental but as this type of motor is perfected its adoption throughout the country can be taken as a matter of course and imports of Diesel oil should increase in partial proportion although it can be expected that the local refining industry will gradually identify itself with this trade as it has with the gasoline and kerosene business.

Iraq

The Azienda Generale Italiana Petroli (A.G.I.P.) which is controlled by the Italian Government is reported to have secured a majority interest in the British Oil Development Co. which holds important concessions in Iraq in the territory west of the Tigris according to International Petroleum Trade. The director of drilling operations according to the report is in Iraq and officers of the A.G.I.P. have made trips there to study local operating conditions.

According to the press drilling operations are proceeding actively. Nine wells have already been drilled in the Shargat district and additional drilling machinery has been shipped. It is stated that the company still has under consideration the construction of a 12-inch line to the Mediterranean at Alexandretta which will more or less follow the line of the railway to the coast.

Czechoslovakia

There are 12 refineries in Czechoslovakia with an aggregate capacity of approximately 8,000 bbls. daily according to an official report of the government. Eleven of these plants are operating at this time.

These plants are largely dependent on supplies outside Czechoslovakia with which to operate these plants the crude oil production of that country being about 500 bbls. daily. The remainder of the crude oil amounting to approximately 2,500 bbls. daily is imported from other countries. In addition considerable unfinished gasoline and distillate is imported and finished at the local refineries. For 1934 the imports were as follows (data in barrels): Crude petroleum, 847,847; raw gasoline, 1,234,668; petroleum distillate, 313,418, and oil distillate, 14,254. It is estimated that the following products were obtained from these operations (data in barrels): Gasoline, 1,354,900; kerosene, 569,625; gas oil, 245,775; lubricating oils, 176,400, and paraffin wax (metric tons), 4,500.

Local refiners according to a report of the department of commerce estimate the gasoline consumption at about 1,530,000 bbls. yearly. This consumption would be greater if it were not for the law which requires an admixture of 20 per cent ethyl alcohol in all motor fuel sold in that country. The estimated consumption of petroleum production in 1934 was as follows (data in barrels): Gasoline, 1,530,000; kerosene, 585,125; gas oil, 210,250; lubricating oils, 291,900, and paraffin wax (tons), 5,350.

Cuba

Having small domestic petroleum resources and faced with an increasing demand for motor and household fuels, Cuba was one of the first countries to promote the use of alcohol as a carburant in motors and for cooking purposes in homes, according to C. C. Concannon, chief of the Commerce Department's Chemical Division.

The use of alcohol for these purposes, it is pointed out, began to receive serious attention following the World War. Distilleries that had worked night and day during the war period to supply the demand were faced with overproduction as a result of reduced overseas business and new domestic outlets were sought. It was found that alcohol could be used in blended motor fuels as well as for cooking, and since that time considerable quantities have been used annually for such purposes.

Cuban alcohol is produced almost entirely from molasses of which large quantities are available as a by-product of the sugar industry. In 1934 a total of 28 distilleries produced almost 30,000,000 liters* of alcohol from sugar-cane molasses, an amount almost identical with the preceding year. An undetermined amount was used by the distilleries in the production of rum, etc., and 1,155,000 liters were exported. Sales to local industries, particularly liquor manufacturers and manufacturers of pharmaceuticals and perfumes totalled 5,519,600 liters while 23,000,000 liters were used for motor fuels and household cooking purposes.

While the demand for denatured alcohol as an ingredient in mixed motor fuels is increasing in Cuba the bulk of the demand is still for household fuel purposes. Of the 23,000,000 liters of denatured alcohol produced in 1934, more than 13,000,000 liters were used as household fuel and the remainder for motor blends, according to the Commerce Department.

Legislation requiring the use of alcohol blends in motors has been introduced in Cuba from time to time, but as yet none of the bills have reached final passage.

* Liter equals 1.056 U. S. quarts.

View in Section 2, along the Canadian River in north end of Oklahoma City oil field. Many of these wells are now on the pump

Low Level of Fluid and Lack of Water Drive Create Pumping Problem

By L. G. E. BIGNELL

THE WELLS IN THE WILCOX sand zone in the Oklahoma City Field are rapidly reaching the stage when some means other than gas lifting will be resorted to in securing production. Of the 527 wells in this zone nearly 200 are now securing oil by pumping. A few of the more recently completed wells flow naturally. A large number are on straight gas lift. About 100 are produced by some form of intermitter. The balance have been classified as pumpers and some are equipped with beam pumping outfits, and about 20 are securing their oil by means of submerged electric pumps.

The formation pressure is down to slightly more than 200 pounds. Some wells make as little as 50 bbls. daily and others make more than 300 bbls. daily on the pump. The amount of oil secured varies because of sand conditions. Many wells have not been properly cleaned before they were put on the pump and this is one essential requirement if the allowable of the well is to be secured.

Ever since this deep production was discovered in December, 1928, the problem of securing the oil after natural flow conditions ceased has confronted the operators. Gas lift has been resorted to quite successfully in most of the Wilcox zone wells and by this means a lot of oil has been recovered. Cost of plants installed for gas lift purposes has been returned to the operators in most instances. Many wells still continue to operate successfully with intermittent gas lift devices.

The consensus of opinion of the operators in this zone, the only one that still contains oil in any appreciable quantities, seems to be that the life of the gas lift is about over and it will be necessary to resort to other means of securing the balance of the oil. The problem is to select some form of equipment that will pay out on its investment cost.

Many operators are installing steel rig fronts with pumping units and securing their oil by straight pumping method. The usual type working barrel is installed at the bottom of the string of 2½-inch tubing installed in most wells for either natural or gas lift production purposes. The sucker rods used are usually made up of approximately one-third seven-eighths inch size and the balance three-quarters inch diameter. The length of stroke is about 72 inches at the beam but is less for the traveling valve because of stretch in rods and tubing. These outfits with gas engines cost approximately $7,500 to install and generally give good results.

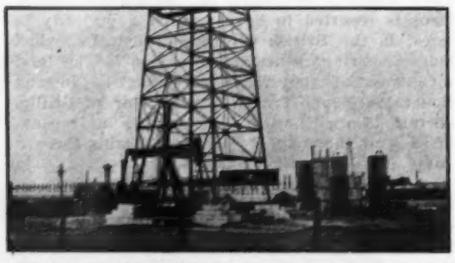
The other type pumping units installed at a few wells consists of long stroke pumping units. These units pump at the rate of from 8 to 12 strokes per minute each stroke being from 10 to 11 feet long. The units are powered with 40-horsepower multi-cylinder gas engines running at from 400 to 600 r.p.m. Usually V-belt drives are provided and reduction in speed between prime mover and the beam is accomplished through a set of reduction gears.

Another type of long stroke unit used to some extent in this field is the pneumatic cylinder pumping outfit. This unit is hung in the derrick and actuated by compressed air. The stroke is usually 10 feet long.

Where steel fronts and walking beams are used with pumping outfits it is usual practice to also install bull wheels for cleanout work and such rigs are equipped with 75-horsepower horizontal type two-cylinder gas engines. The rigs equipped with long stroke pumping units and the 40-horsepower engines are usually serviced with portable units mounted upon trucks.

The pumping loads are based upon handling a column of salt water from the depth of 6,500 feet. Counterbalances are installed on all rigs so that the actual power required for lifting the fluid is from 7 to 35 horsepower depending upon the volume handled. Theoretically a long stroke pumping unit with an 11-foot stroke operated at 12 strokes per minute with a 1⅞-inch plunger set at 6,500 feet will handle about 200 bbls. of fluid daily with an expenditure of about 7 horsepower. The same type unit properly counterbalanced and with the 1¾-inch plunger in the working barrel and making twelve 132-inch strokes per minute will displace 472 bbls. of fluid daily and require about 35 horsepower.

Undoubtedly many wells will be equipped with either the rig front type pumping outfits or the self-contained long stroke pumping units soon. This is particularly true of the smaller operators who must think of first costs and who do not already have compressor plants installed to furnish gas for lifting purposes. Some of these small operators have secured their gas for gas lift purposes from larger plants nearby and have been successful so long as the volume of gas required per barrel of oil has not exceeded 5,000 to 6,000 bbls.



Oklahoma City Wilcox zone well on pump with large compressor plant in background furnishing gas for lift purposes

As formation pressures have dropped more gas has been needed and in some instances it is now necessary to supply as much as 10,000 feet of gas per barrel of oil lifted. This gas costs from 8 to 10 cents per 1,000 feet at the well head and while some allowance is made for gas returned to the gas system the cost of securing the oil is too high to be long continued.

On the other hand large operators who have installed compressor stations for gas lift purposes and have also operated natural gasoline plants have large investments in this class of equipment and while it has been paid for in most instances there is still a desire on the part of the owners to continue to use this machinery as long as possible. It would be profitable for them to continue to gas lift their oil even if the gas cost as much as 50 cents per barrel but there are other conditions entering into their problems making it desirable they change over to some other form of production as soon as possible.

With this condition facing them some of the larger companies have been carrying on research for some time past seeking to develop some form of bottom hole pump to be operated by compressed gas supplied from the central compressor stations. The lines are all laid to the wells and the tubing is in the hole and if some form of bottom hole pump can be developed to be run into the well at the lower end of this tubing and secure the oil it is the logical solution of their production problems.

Artificial submergence intermitting devices have been satisfactory, but for successful operation it is really necessary a fluid level of several hundred feet be available in the bottom of the hole. Under this relatively high head the accumulation chamber of these intermitters will fill quickly and the slug of oil can be moved up the tubing by admission of a slug of high pressure gas.

Now the formation pressure in the Wilcox zone is around 200 pounds per square inch fluid is not standing very high in the bottom of the well and the entrance into the chamber at the bottom of the tubing is at slower rate of flow.

The average penetration of the wells in the Wilcox sand has been about 120 feet. In many wells much of this hole has been filled with cement to cut off bottom water. Other wells are not troubled with water and if the bottom of the

hole is properly cleaned tubing can be run to very near the bottom of the well.

The rate at which the oil will flow into the hole is determined by sand characteristics. There is no water drive effective in the Wilcox sand zone in Oklahoma City if the water drive is considered in the same manner as common to that type of formation. There are many wells producing some salt water with the oil but it has been found much of this water can be cut off by a good cementing job. This indicates the water may have migrated from the lower Simpson formation directly below the Wilcox formation. Regardless of the source of the water so far encountered in the Wilcox sand wells many operators do not believe there will be an effective water drive in this formation and therefore believe the fluid level in the hole will be relatively low.

The problem therefore resolves itself into devising some form of pumping unit that can be filled with oil under relatively low head and then delivering this oil to the surface by compressed gas admitted below the accumulated oil in the chamber at the bottom of the tubing.

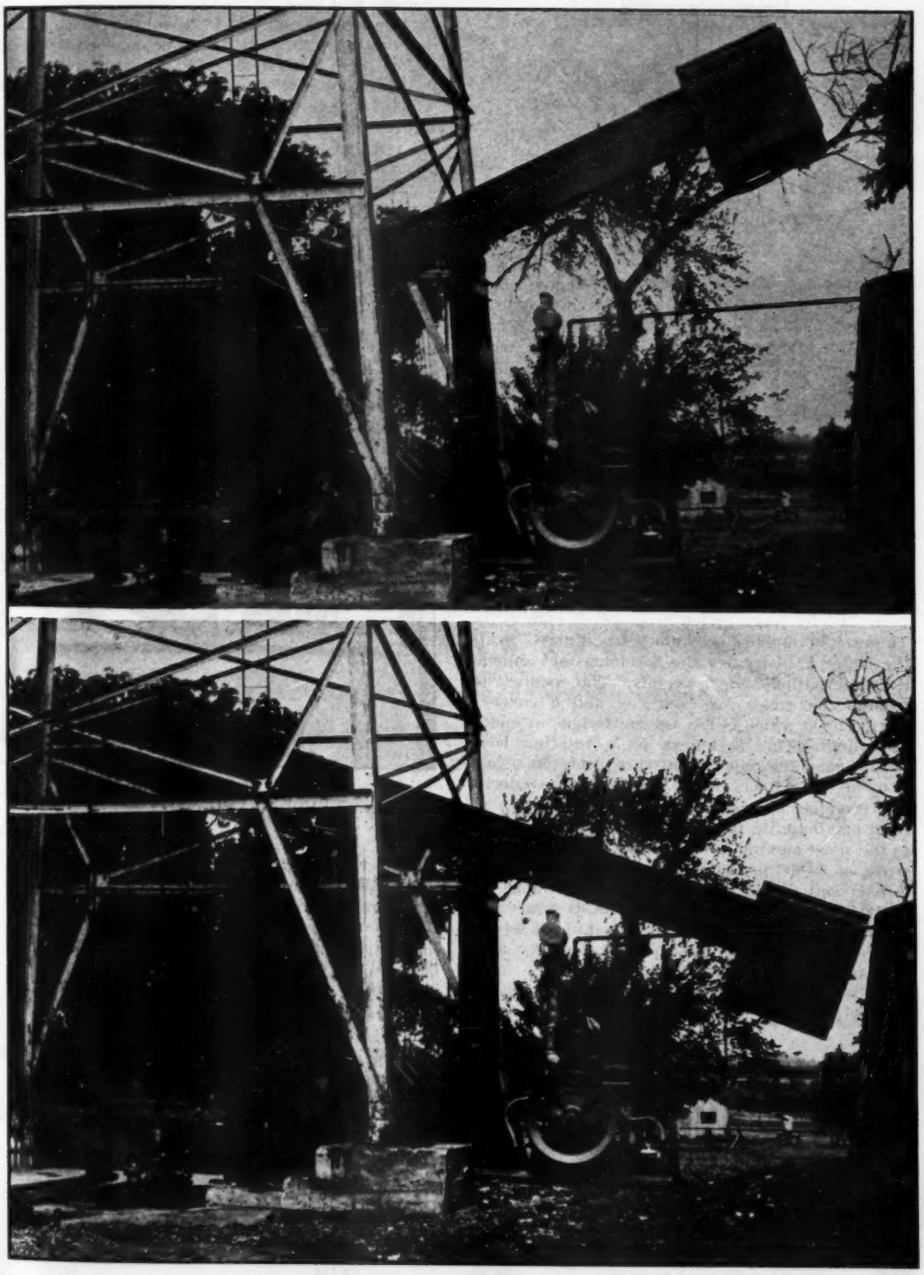
It has been found by actual trial gas injected through the annular space between tubing and casing at 350 pounds pressure at the surface will lift a column of this oil some 75 or 80 feet high in the tubing all the way to the surface and discharge it into the oil and gas separators. Gas required has been from 1,200 to 1,400 cubic feet per barrel of oil. If this type of bottom hole pump can be perfected and will perform in this manner it will prove an ideal solution for production problems for those operators who have compressor plants and surface lines already installed to serve their wells. The only additional investment will consist of the bottom hole pump.

The idea of bottom hole pumps is not new and one type of pump of this kind was tried in some Oklahoma City wells some time ago. It encountered difficulties because of sanding up and accumulation of paraffin around the valves and in the tubing.

When a well is equipped with a pumping outfit consisting of rods and working barrel it is usual practice to permit gas to escape through the annular space between tubing and casing at the well head and there is a chilling effect on the oil within the tubing as the gas flows upward and expands. This has caused the solids in the oil to precipitate on the inside walls of the tubing and in many wells it has been necessary to pull rods and run scrapers frequently. At a cost of about $100 per day for shutdown time and labor this operation is quite expensive and is to be avoided as much as possible when the pumping wells make less than 100 bbls. of oil per day.

This is one reason it is hoped the use of bottom hole pumping devices can be applied to these wells. If necessary it is possible to introduce the gas into the hole at relatively high temperatures and in this way prevent paraffin accumulation. It will not add much to recovery costs to heat the gas before it is injected into the well and it has been noted where the compressor plant is located close to the well the hot gas has reduced paraffin problems to a minimum.

At this time it seems quite probable the Wilcox sand zone wells will soon be produced by one of two methods, either equipped with surface beam pumping outfits of the standard walking beam type or long stroke pumping units or some type of bottom hole pumping engine will be developed to be operated by gas at about 350 to 500 pounds pressure and 1,000 to 1,500 feet per barrel of oil to be supplied by plants already installed. Regardless of the method selected it is believed Wilcox sand wells will continue to produce oil for a long time to come but, of course, at a much lower rate than when produced by gas lift methods. The volume to be recovered will therefore justify further investment in equipment but naturally it is desirable to limit the cost of the investment as much as possible because returns on the investment may be slow.



Long Stroke pumping unit in Oklahoma City Field. Well pumping at rate of twelve 132-inch long strokes per minute. Making about 300 bbls. daily

Compressed Coke-Oven Gas Used as a Motor Fuel

Following its national policy of substituting domestic products wherever possible for imported materials, Germany is now experimenting with coke-oven gas as a motor fuel, according to a report from Consul Sydney B. Redecker, made public by the commerce department's chemical division.

With the view to demonstrating the practicality of utilizing coke-oven gas as a motor fuel, the Ruhrgas, A.G., joint distributing subsidiary of Ruhr coke plants, recently sent a large omnibus from Essen to Konigsberg, in the extreme northeastern part of Germany, powered exclusively with gas from Ruhr coke ovens, according to the report. The trial was pronounced successful.

Gas for the trip was carried in steel cylinders on a separate trailer which were recharged en route at Hanover. The Hanover station, which receives its gas supply by pipe line from Ruhr coke plants, is said to be the only illuminating-gas motor tank station in the world.

The methane is recovered in these plants from coke-oven gas and stored in tanks under normal pressure. The gas is later compressed in high pressure storage tanks which serve as filling stations for motor vehicles, making it unnecessary for the vehicles themselves to carry compressors, the report states.

Rodessa Casing Rules

Dr. J. A. Shaw, director of the mineral division of the Louisiana department of conservation, has issued the following rules governing the completion of wells in the new Rodessa Field, Caddo County, Louisiana:

"Not less than 250 feet of surface pipe to be set in new wells and cement to top.

"The second string of pipe to be set in top of anhydrite and cemented with at least 450 sacks of cement.

"The third or producing string of pipe to be set immediately above oil-producing horizon and cemented up into the second string.

"The second and third strings must be new pipe, the second string to have a mill test of not less than 2,000 pounds and the third string to be cold water test on location to a minimum of 2,500 pounds and witnessed by an agent of department of conservation.

"All wells to be equipped with new 2 or 2½-inch tubing, new christmas tree assembly with test pressure of 5,000 pounds.

"All drilling rigs must be equipped with blowout preventors."

Sucker Rod Fatigue Changes With the Nature of Corrosive Elements in Oil

By F. B. BAYLESS
Oil Well Supply Co.

TO THE CASUAL OBSERVER, a sucker rod is probably nothing more than an elongated bolt or bar of steel, with upset ends, threaded to be screwed together when run into a well. However, to the production engineer or superintendent who has battled with ever increasing lifting costs, a sucker rod is one of the most important items of pumping equipment.

At first, the most common workable metal used was wrought iron. The necessity for greater strength and lower cost soon brought soft steel into use. When the limit of the strength of soft steel was exceeded, it was necessary to resort to steels of higher carbon content. Later, steels with the alloying element manganese increased to give additional strength, solved the problem for a time. About this time, manufacturers became aware that something had to be done in addition to changing the composition of the metal and resorted to heat-treating in various forms.

Until the adoption of A.P.I. Sucker Rod Standards, each manufacturer had his own ideas as to what constituted the best forging and joint designs and manufacturing processes.

Modern upsetting machinery, accurately controlled forging operations, and rigid and thorough inspections will insure sound forgings, which, when machined to A.P.I. specifications, will produce sucker rod joints satisfactory in every respect.

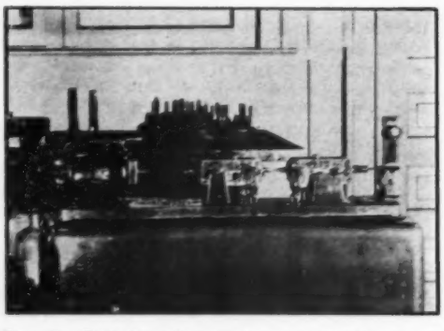


Fig. 1—Rotating beam type of testing machine set up to determine "fatigue"

The outstanding problam of further improvements in sucker rods is principally dependent upon metallurgical advancement. The metallurgy involved in the manufacture of sucker rods includes not only the analysis and selection of steels but study of heat treatments and physical properties.

There are three general classes of sucker rod service, namely: (1) In wells where we have stress only to consider; (2) where we have corrosion in addition to stress; (3) where we have stress in addition to the severe embrittling action of hydrogen sulphide gas in conjunction with corrosive fluids.

These classes could be subdivided into many smaller divisions which would include an infinite variety of peak loads, stress ranges, types of corroding fluids and intensities of hydrogen sulphide embrittlement. For the purpose of this article, it is necessary to discuss only the major variables in the three classes of sucker rod service referred to.

While considering the various classes of service, it might be well to consider the three general types of loads or stresses. These are: (1) Static or dead load; (2) repeated, alternating and varying stresses; (3) impact stresses.

Static loading is, as the name implies, a load which is constant and does not vary. Loads of this type are not encountered in oil well pumping.

The most important properties to be considered in the selection of sucker rods for wells, where stress only is encountered, are the fatigue or endurance limit and the impact resistance as indicated by such tests as the IZod, Charpy, or the less common "repeated impact" or "impact tensile" tests. Fatigue or endurance limit may be defined as "that stress in pounds per square inch at which material would be expected to operate or endure indefinitely." A greater stress would cause fatigue or failure. Endurance limits are most often determined on machines such as are shown in the photos and diagram in Figures 1, 2 and 3, respectively.

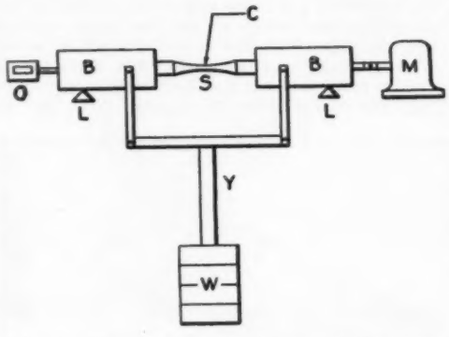


Fig. 3—Rotating beam fatigue testing machine with test sample in place

The specimen "S," referring to Figure 3, is carefully machined so that its center portion has a large radius, eliminating any notch effect, and an accurately placed critical section at "C" which is measured with micrometer exactness. This specimen is placed in bearings "B" and a calculated weight "W" is applied to the specimen through the yoke "Y" by lever action from pivot points "L." This weight supplies the known stress at "C" while the motor "M" rotates the specimen and supplies the "alternations" or "reversals." The counter "O" records the cycles for each run and a curve is plotted upon which is located the fatigue or endurance limit. This is known as a rotating beam fatigue machine and during each cycle or revolution the outer fibers of the specimen are subjected to a complete reversal of stress. The stress ranges from maximum in tension through zero or neutral to the same maximum in compression. Thus, for a stress of 30,000 pounds per square inch, the specimen is actually subjected to a "stress range" of 60,000 pounds per square inch. These values are, of course, theoretical and determined under laboratory conditions. A suitable factor of safety must be applied when using them in practice.

When determining the suitability of a sucker rod for use under given conditions, it is, of course, necessary that these conditions be known and understood as fully as possible. The stress under which a given string of rods operates can be determined by several well-known and sufficiently accurate methods. The most common involves the use of the combined weight of the fluid being lifted and the weight of the string of rods multiplied by an impulse factor, which is a function of the speed and stroke.

In recent years, many engineers have studied sucker rod stresses with various types of dynamometers and from these studies a much clearer understanding of the nature and magnitude of rod stresses will result.

Where stress only is to be considered, and it is definitely known that there is no corrosive condition, these methods of calculating and measuring well stresses give a very satisfactory basis upon which to make a recommendation. Comparing this figure with the endurance or fatigue properties of the rod and using a suitable factor of safety have given reliable and economical service predictions.

Sucker rods operating in wells under such conditions, when overloaded, fail from fatigue only. Surface defects such as nicks, cuts or pits, especially at a vital point, such as the section adjacent to the upset, are the start of fatigue failures which shorten the life of the rod materially.

Figure 4 shows enlarged views of sucker rod and laboratory test specimens which have failed from overstress. Table 1 gives essential physical properties and recommended maximum stresses for economical service under conditions of stress only. Note that these deep acid etched samples show that no corrosive action or surface imperfections contributed to the failures, which resulted from overstress only.

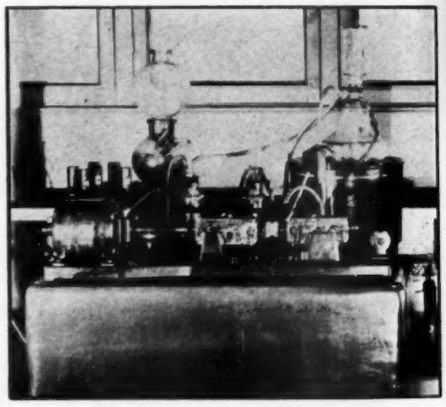


Fig. 2—Sulphide corrosion fatigue testing machine for sucker rods

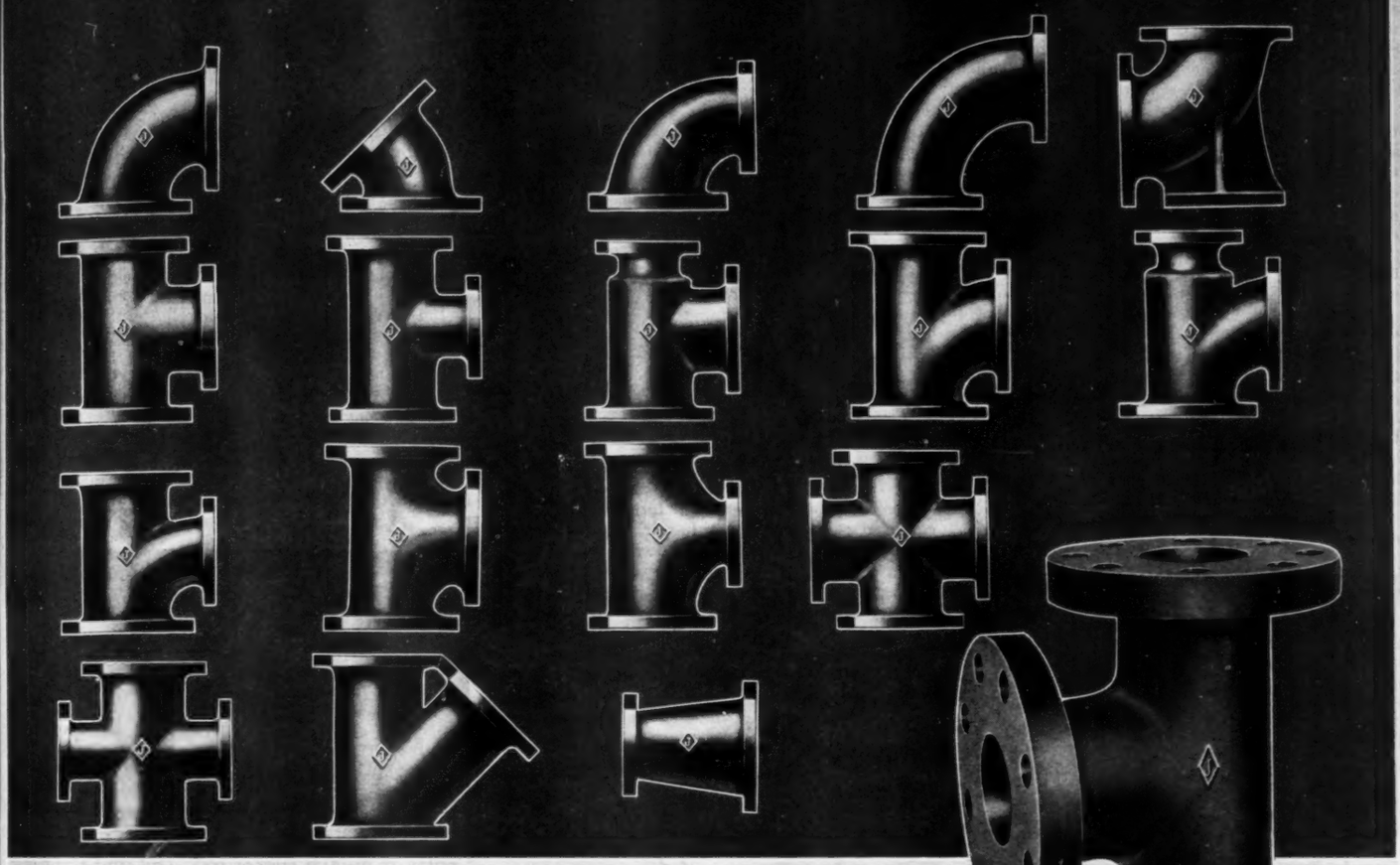
The second type of sucker rod service, referred

TABLE 1—SHOWING SOME ESSENTIAL PHYSICAL PROPERTIES OF SUCKER RODS FOR USE UNDER STRESS CONDITIONS COVERING A BROAD RANGE*

Symbol	Type	Yield point lbs./sq. in.	Endurance limit lbs./sq.in.	Izod ft. lbs.	Max. stress for economical service lbs./sq. in.†
C1*	Plain carbon	52,000	28,500	42	23,100
C2*	Plain carbon	55,300	25,000	15	21,000
C3*	Plain carbon	56,600	46,000	22	27,600
C4	Plain carbon	60,670	47,000	22	28,200
C5	Plain carbon	97,000	46,000	40	39,500
CM1	Carbon-manganese	80,400	42,500	42.8	37,500
CM2*	Carbon-manganese	64,200	48,500	45	29,100
CM3	Carbon-manganese	67,500	52,500	53	31,500
CRN	Chrome nickel	62,800	48,500	57	29,100
CRM	Chrome-moly	105,000	74,500	87	44,700

*In all cases the values shown are those secured by testing the weakest section of the rod body where rods are of the non-uniform type.
†Based on allowing 60 per cent of endurance limit as a maximum working stress.

TIME-TESTED



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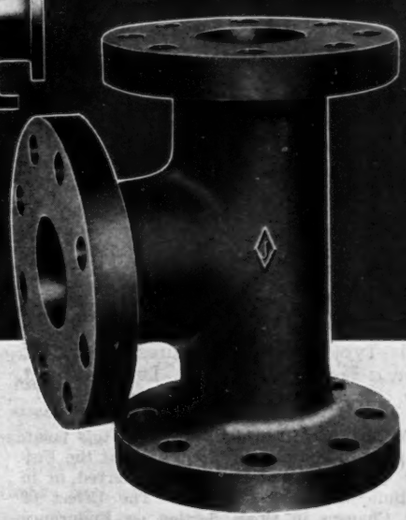

Fig. 283—Jarecki Extra-Heavy Cast Iron Flanged Tee—Regular

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to above, presents several complications and the problem is not only one of stress resistance but also corrosion resistance.

There are two types of corrosion. The first takes place in unstressed metals, such as tanks, pipe lines, casing, etc., and is known as "static" corrosion. Evidence of this type of corrosion is in the form of pits or wasting away of the metal. Pits which have been produced in this manner are usually considered mechanical imperfections and when a statically corroded member is later subjected to stress, its decrease in fatigue resistance is due to the fact these pits caused either stress concentration or a reduction of metal area.

Unstressed corrosion, however, is not often a factor in sucker rod life as only in the case of a string of rods hanging in a "down" well should we expect to encounter this condition. Usually the corrosive fluid attacks the rods in the presence of stresses which are set up by the pumping cycle. We call this "stress corrosion" which in turn causes "corrosion fatigue" or "corrosion embrittlement fatigue." The corrosion fatigue value of a given metal is always lower than its fatigue value in air.

The effect of stress concentration due to pits or notches is familiar to most of us as we have observed how easy it is to break a stick of wood or bar of steel when a notch has been cut in it and how difficult it is to break a similar bar or stick which has a smooth surface. It is not so much that the area of the bar has been reduced at the root of the notch but rather the notch has actually reduced the fatigue resistance of the bar. This can be proved by making fatigue tests on specimens having various types and sizes of notches.

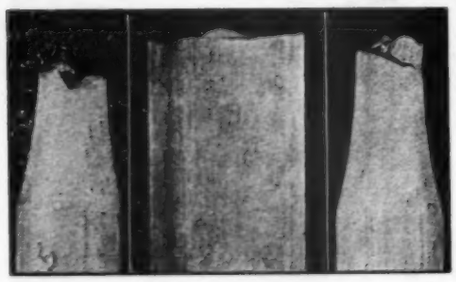


Fig. 4—Typical fatigue failures. Mag. 2X. Center, a ¾-inch sucker rod. Left and right, laboratory specimens

Refer to Figure 5 which illustrates this point. These were specimens which were run at the University of Illinois and have been referred to in their Bulletin No. 124 entitled "The Effect of Abrupt Changes in Cross Section on Endurance Values."

Some metals are damaged more by a given type notch than others and for corrosion fatigue resisting sucker rods, we should use that metal which inhibits to the greatest degree the formation of fine notches or shallow pits and offers the greatest resistance to their growth. This metal should also offer maximum resistance to the embrittling action of hydrogen sulphide. The highly ductile metals have this desirable property of being resistant to the damaging effects of corrosion and embrittlement. These highly ductile metals are

TABLE 3—RESULTS OF SLOW SPEED HYDROGEN SULPHIDE CORROSION FATIGUE TESTS OF SUCKER ROD METALS

Peak computed stress ..... 30,000 pounds per square inch
Stress range ..... 60,000 pounds per square inch
Speed of stress reversals ..... 36½ per minute
*Synthetic well fluid temperature ..... 80°—90° F.

Material and treatment—	Cycles or reversals of stress to cause failure
Engine bolt refined plain wrought iron—no heat treatment	330,700
SAE 1050 carbon steel—normalized, quenched and drawn	702,400
.14 carbon, 2.05 manganese—quenched and drawn	737,300
.31 carbon, .57 nickel, 1.27 copper— quenched and drawn	790,000
3 per cent nickel wrought iron, normalized	850,050
Low metalloid 3½ per cent nickel-moly. steel—normalized, quenched and drawn	1,266,130

* Synthetic well fluid made of 22,000 parts per million sodium chloride, dissolved in distilled water.
* Synthetic well fluid made of 5,000 parts per million calcium chloride dissolved in distilled water.
* Synthetic well fluid made of 3,000 parts per million magnesium chloride, dissolved in distilled water.

shown in Table 2 under the Type 2 classification. If it were possible to produce a material which would be entirely resistant to corrosion, we would,

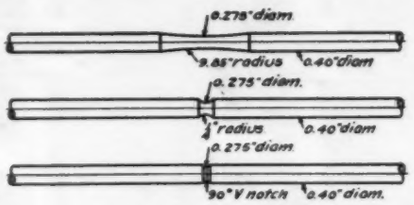


Fig. 5—The effect of notches on endurance limit. All are 0.49 carbon steel heat-treated. Specimen 1 had an endurance limit of 49,000 lbs. per sq. in.; No. 2, 45,080; No. 3, 19,600

of course, expect its corrosion fatigue value to be equal to that determined in air. Unfortunately, this is not the case with commercial metals.

To illustrate the combined effect of stress and corrosion operating simultaneously, refer to Figure 6. This illustration shows enlarged views of laboratory fatigue specimens and a sucker rod which were operated under stress and corrosion causing failure in both cases. These samples have been etched in acid to bring out the stress corrosion cracks. A comparison of these specimens with those

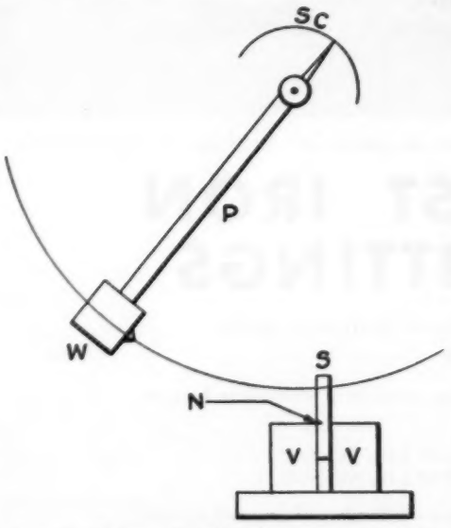


Fig. 7—Diagram of Izod impact machine

shown in Figure 4, which also have been etched, will show the results from stress corrosion as compared to specimens operating under stress only.

In the case of laboratory specimens shown in Figure 4, the material had an air endurance value of 52,000 lbs./sq. in., at which stress it would be expected to run indefinitely. The failure was caused in this particular specimen by overstressing to 53,000 lbs./sq. in. Laboratory specimens shown in Figure 6 are the same material and were tested in the presence of a synthetic well fluid and failure took place under a stress of only 30,000 lbs./sq. in.

The object of all laboratory testing is to predict in a short time just what may be expected from a given material when operated in the field. For this reason, we are constantly attempting our testing to more nearly approach field conditions.

Figure 2 shows a corrosion fatigue test machine in which the stressed specimen rotates at a speed of 36½ r.p.m. and at the same time a synthetic

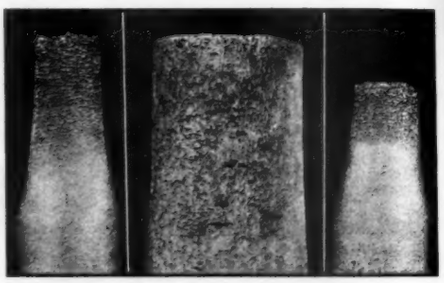


Fig. 6—Corrosion fatigue failures. Mag. 2X. Center, a ¾-inch sucker rod. Left and right, laboratory specimens

well fluid passes over it supplying the corroding action in an attempt to duplicate field pumping conditions. This well fluid is made from distilled water in which chemically pure salts are dissolved. This synthetic well fluid is used because it can be duplicated from test to test for comparative purposes and also because it produces a type of corrosion which occurs in some of the most severe wells. The resulting fluid has the following composition:

Sodium chloride	22,000 parts per million
Calcium chloride	5,000 parts per million
Magnesium chloride	3,000 parts per million

The machine is so operated that air is excluded from the specimen and the fluid is circulated by a pulsator which is actuated by natural gas. Due to the length of time consumed in making such a test (120 to 1,000 hours), it has been deemed advisable

TABLE 2—CHEMICAL COMPOSITION AND HEAT TREATMENTS OF TYPICAL SUCKER RODS

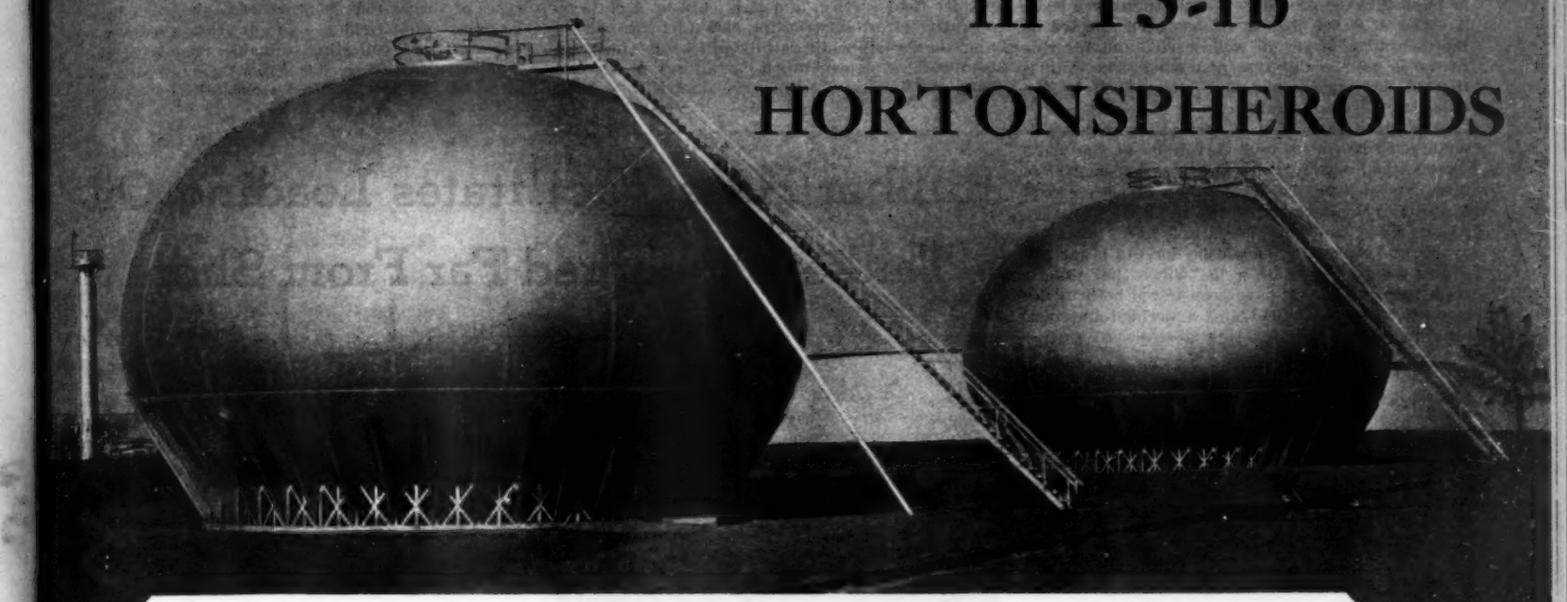
Type 1—Rods offered for stress conditions

Symbol	Composition Type	Carbon	Mang.	Phos.	Sulph.	Silicon	Chrome	Nickel	Moly.	Nearest SAE No.	Heat treatment
C1	Plain carbon	0.35	0.70	0.025	0.040	0.20	....	....	....	1035	Ends quenched and drawn
C2	Plain carbon	0.50	0.65	0.025	0.040	0.20	....	....	....	1050	None
C2	Plain carbon	0.50	0.65	0.025	0.040	0.20	....	....	....	1050	Ends normalized
C4	Plain carbon	0.50	0.65	0.025	0.040	0.20	....	....	....	1050	Entire rod fully normalized
C5	Plain carbon	0.50	0.65	0.025	0.040	0.20	....	....	....	1050	Entire rod treated, normalized, quenched, drawn
CM1	Carbon-manganese	0.40	1.80	0.025	0.040	0.20	....	....	....	T1340	Entire rod normalized
CM2	Carbon-manganese	0.40	1.20	0.025	0.040	0.20	....	....	....	X1340	Ends normalized
CM3	Carbon-manganese	0.40	1.20	0.025	0.040	0.20	....	....	....	X1340	Entire rod normalized
CRN	Chrome-nickel	0.40	0.65	0.025	0.025	0.20	0.90	0.75	....	3140	Entire rod normalized
CRM	Chrome-moly	0.30	0.65	0.025	0.025	0.20	0.65	....	0.20	4130	Entire rod treated, normalized, quenched, drawn

Type 2—Rods offered for sulphide and non-sulphide corrosive conditions

WI	Wrought iron	0.040	0.050	0.080	0.030	0.180	....	....	....	Slag 4.50	None
NWI	Nickel wrought iron	0.020	0.050	0.040	0.025	0.150	....	3.00	....	Slag 3.00	Entire rod normalized
NM1	Nickel moly steel	0.150	0.550	0.025	0.025	0.200	....	1.75	0.25	4615	Ends normalized
NM2	Nickel moly steel	0.150	0.550	0.025	0.025	0.200	....	1.75	0.25	4615	Entire rod normalized
LM1	Low metalloid	0.04	0.16	0.010	0.010	0.05	....	3.00	0.20	....	Entire rod normalized
LM2	Nickel moly steel	0.04	0.05	0.010	0.010	0.15	....	3.50	0.22	....	Entire rod treated, normalized, quenched, drawn
CM2	Carbon manganese	0.40	1.20	0.025	0.040	0.20	....	....	....	X1340	End normalized
CM3	Carbon manganese	0.40	1.20	0.025	0.040	0.20	....	....	....	X1340	Entire rod normalized
CRN	Chrome nickel	0.40	0.65	0.025	0.025	0.20	0.90	0.75	....	3140	Entire rod normalized

Holding 26-lb Natural Gasoline in 15-lb HORTONSPHEROIDS



THERE is a strong tendency — under present conditions — to blend 26-lb. natural gasoline with topped and cracked gasoline for winter motor fuel. The production of natural gasoline during the fall does not fully meet this seasonal need. Stored stock must supply the difference.

Economical storage of natural gasoline in the higher volatile grades necessitates pressure containers. The 26-lb. grade boils at a temperature of approximately 70° F. By permitting the internal pressure to build up to 12 lb. this gasoline can be held without boiling when the surface temperature does not exceed approximately 100° F. In some climates that is adequate protection, but the oil company, whose tanks are illustrated here, has adopted 15 lb. internal pressure as better suited to year-round storage of the 26-lb. natural. At that pressure, boiling is prevented up to about 110° F.

Economy in large-scale storage at 15 lb. internal pressure is assured by the development of the Hortonspheroid. In theory, its shape is the ideal one for a closed container subject to a combination of an internal pressure and liquid load. In practice, our many years experience with special tank work has enabled us to fabricate and erect these spheroidal containers at a reasonable unit cost. They are ordinarily built in sizes from 5,000 to 80,000 bbl. and for pressures from 1 to 20 lbs. per sq. in. The installations pictured here are 20,000-bbl. Hortonspheroids designed for 15-lb. pressure.

The Hortonspheroid is one of several special types of oil tanks which we build. Our engineers have specialized in the field of controlling evaporation loss from oil in storage and we can therefore offer time-tested recommendations for any type of product, any climatic condition, and any quantity. Tell us briefly what your storage problem is and, without obligating you in any way, we will gladly give you information on a suitable installation for your conditions. Please address our nearest office.

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to run all specimens at a stress of 30,000 lbs./sq. in. rather than attempt to vary the stress on each specimen, and from the results construct a curve, as is usually the procedure for air endurance tests. A stress of 30,000 lbs./sq. in. has been selected as representative of severe well service and for this reason is used in this type of testing. The evaluation of the various metals is determined by the number of cycles to failure.

The third type of well service—hydrogen sulphide embrittlement and corrosion—is the most severe and probably more effort and money have been expended on the development of sucker rods for this type service than upon all other types. About six years ago, operators were becoming aware that something should be done to lower the lifting costs of sulphide wells. Since that time a great many materials have been tested both in the laboratory and the field and a decided improvement in sucker rods for this most severe service has been accomplished.

In the early years of this investigation, it was clearly demonstrated that metals ordinarily used for sucker rods were not suitable for use in the manufacture of rods which would operate under sulphide conditions, especially when operating under stresses approaching 30,000 lbs./sq. in.

After years of experiment and investigation, it has been determined that ferrous metals containing nickel are desirable. It has also been proved that ferrous metals containing moderate quantities of carbon and manganese are not desirable for this type service.

Table 2 includes the composition and method of heat treatment of various sucker rods offered as Type 1 for noncorrosive service as well as Type 2 for sulphide and nonsulphide corrosive conditions. Table 1 lists the Type 1 sucker rods according to essential physical properties which determine the rods' adaptability to meet stress conditions. Table 3 shows the results of "slow speed" sulphide fatigue tests on several types of sucker rod metals and are arranged in the order of their ascending values as determined by this test.

The successful rod for corrosive and sulphide service should have the following characteristics which are listed in the order of their importance.

1. Inherent resistance to corrosion and embrittlement.
2. Uniformity of composition and physical condition to eliminate localized zones of corrosive attack.
3. Sufficient fatigue resistance to allow the highest possible operating stresses.
4. Extreme toughness, ductility and resistance to stress concentration.
5. Cost which is commensurate with service rendered.

There are several impact testing machines, the principal ones being Izod, Charpy, "repeated" and "impact" tensile. The first two use notched specimens for ductile materials, while the latter use unnotched specimens. The Izod is probably the most popular and best known and Figure 7 illustrates this type machine by diagram.

The standard specimen "S" is clamped in the vise "V" so that the notch "N" is in proper position. The pendulum "P," with weight "W," swings from a fixed height so that, at the instant the weight "W" strikes the specimen exactly 22 m.m. from the notch center, it delivers a blow of 120 foot pounds. The specimen breaks off or bends over at the notch and resists this blow, according to its ability. The "foot pounds resistance to single blow fractures of the standard Izod specimen" is indicated on a calibrated scale "SC."

While there is no definite relationship established now between Izod values and other physical properties, impact resistance is taken as an indication of the metal's ability to withstand sudden overloads, especially when surface imperfections (in reality notches of one form or another) are present. This is a valuable property in sucker rods and high Izod impact values together with high endurance or fatigue limits are most desirable.

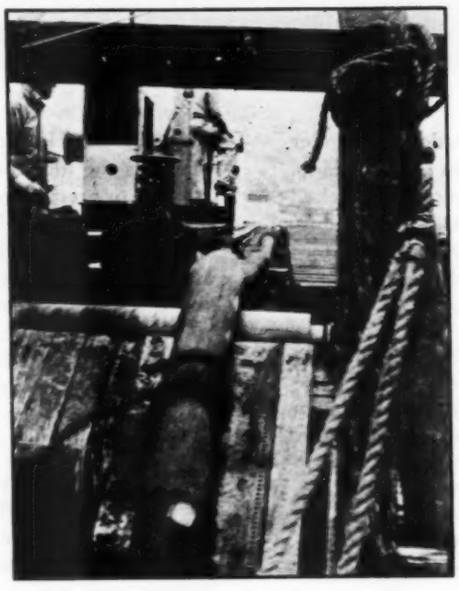
The foregoing information is presented in the hope that the user of sucker rods will have a more accurate picture of the present day situation regarding this most important item of production equipment and all commercial types of sucker rods are given in the tables. Manufacturers are constantly striving to improve their products so that the user will secure better results. Laboratory work and research are valuable only when they predict field service, and it is only by a close cooperative effort between the manufacturer and the user that worth-while results will be obtained.

We must depend upon metallurgy to develop metals of improved composition and with suitable heat treatments, but as long as we have only laboratory results the new development is just an "idea." The final test must be in the field. All types of sucker rods mentioned in this article have been in actual field use for at least a year and operators are collecting valuable records of the performance of these rods. From these records operators will be able to draw accurate conclusions.

Rubber Hose Facilitates Loading Oil Tanker Anchored Far From Shore

By L. L. HORCHITZ
The B. F. Goodrich Co.

ONE LARGE CALIFORNIA OIL company is forced to employ unusual methods in loading oil tankers at one of their docks. The nearest large tankers can approach the docks is approximately one-quarter mile off shore. This seemingly impossible situation has been satisfactorily met by means of a novel hose arrangement which permits the oil to be pumped to the boat for a distance of 1,200 feet.



The 200-foot sections of rubber hose is run out to the tanker and returned to shore by means of a chute equipped with rollers

The hose connection between dock and boat consists of twenty-four 50-foot lengths of 8-inch rubber oil hose. The hose is floated by means of hermetically sealed oil drums, as shown here.

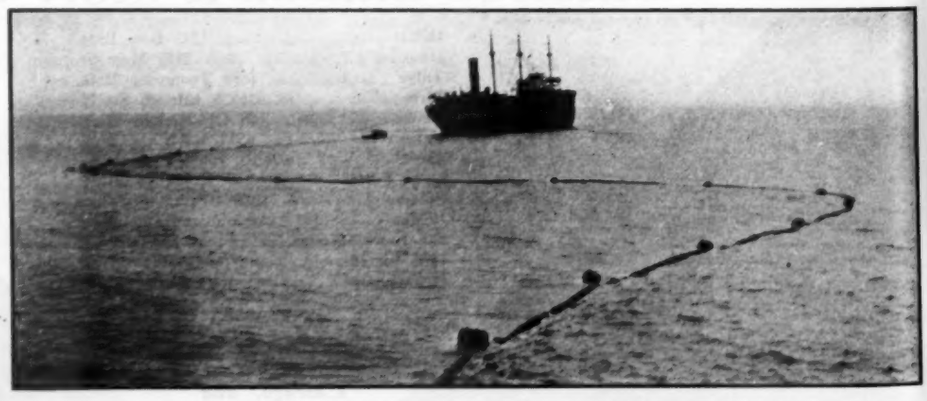
One end of the hose is attached to a motor launch which pulls it out to the boat where connection is made at the stern. Oil is then pumped through line at a uniform pressure of 100 pounds.

The serpentine effect created when towing the line to the boat is done for a very definite purpose. The launch first leads the hose directly into the wind until the entire 1,200 feet is strung out in the water from the dock, then it loops back and approaches the ship from windward. This "tacking" saves the additional drag on the hose due to tide wash as well as wind action. There is no metal to metal connection, such as a steel cable, to take the tensile strain on the hose through its length, and despite the fact that the entire drag of the line is carried through the hose it has not been found subject to any undue strain.

Loading time averages from 8 to 18 hours, according to ship size, the longer time being necessary due to the fact that operations must cease when the tide flows to permit the boat to move out to deeper water.

The line is stored on the platform, in four 50-foot lengths, which are left flanged intact as the hose is drawn from the water by means of a cable run out from the gas engine. The hose is brought out of the water, up the chute, over a roller and onto a series of "dollies." As the four lengths are unbolted at the flanges, they are rolled over onto the platform and the next four drawn out so that in all there are six lengths, each consisting of four 50-foot sections lying parallel on the platform. At the bottom of the chute are two rollers similar to the one at top except they are placed in a vertical position to take care of any side rub. When the line is run into the water the steel drums are attached by a man standing at the top of the chute. The last flange is attached directly to the valve outlet, shown in front of engine, and the pumps are started. It takes approximately 40 minutes to rig up the entire 1,200-foot line and an equal length of time to pull it in.

Rubber hose has been used in this capacity for several years; the average hose life has consistently increased during this time due to improvements in both tube and cover stocks. Most recent records show this hose capable of loading 15,000,000 bbls. of oil before replacement is considered necessary.

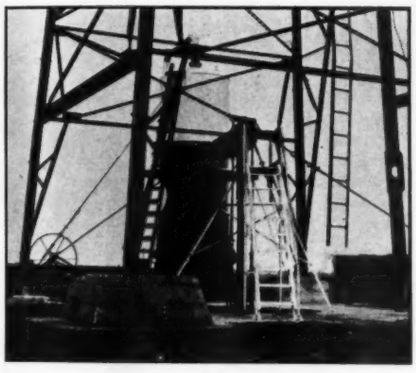


More than 1,000 feet of rubber hose was floated on sealed drums to fill this tanker

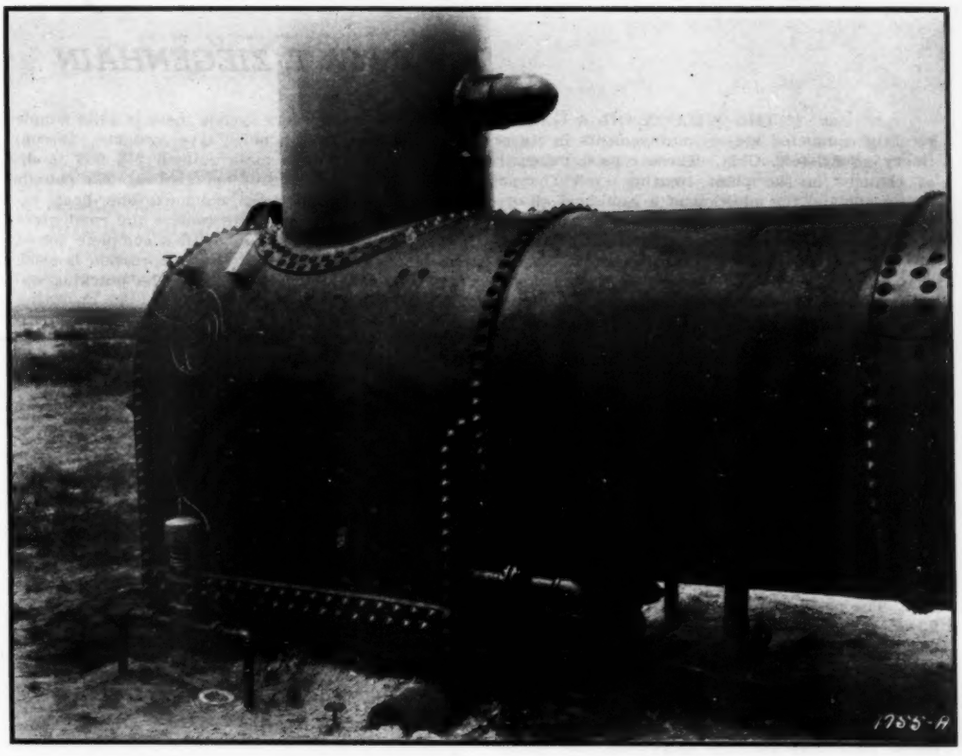
OPERATING IDEAS

Stairs Aid Leaseman

Nearly everyone is familiar with the toys made out of strips of steel punched and cut in such a manner as to permit assembly into various objects such as bridges, towers, buildings and similar structures. The same general idea has been applied to the design of stair ways and walk ways and a structure made in this manner is shown in the accompanying cut. This stair and walk way is erected at a Continental Oil Co. well in the Edmond field, Oklahoma to permit the leaseman to reach the control valve at the well head to adjust rate of flow in accordance with the state allowable

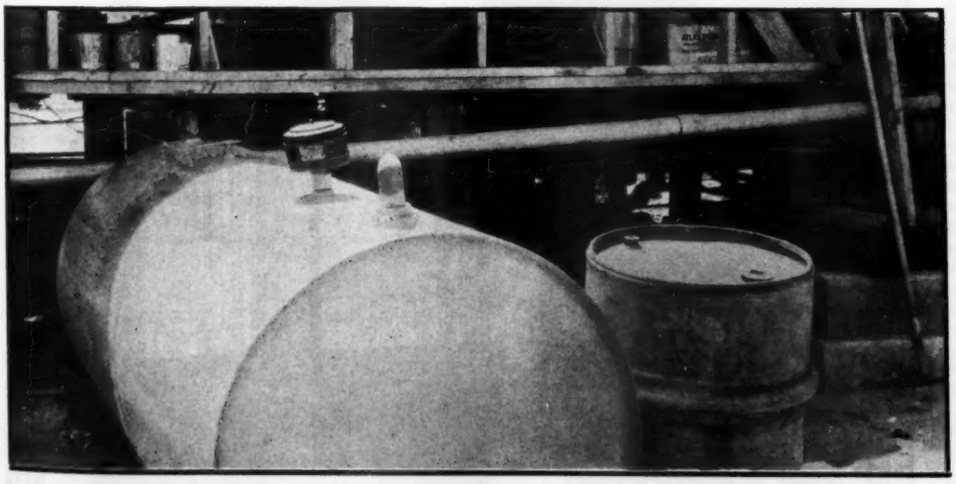


Thermostat Control Regulates Boiler Temperature



Some oil companies are now treating oil by circulating it over the tubes of an ordinary field boiler bringing the temperature up as high as 180 degrees. One company which pioneered this process found that by changing the course of the oil and running it around the firebox as it enters the boiler an agitation was set up which allows the basic sediment to be broken up at a much lower temperature. The average temperature of the boiler shown in the accompanying photograph is 120 degrees F., and is maintained by thermostatic control

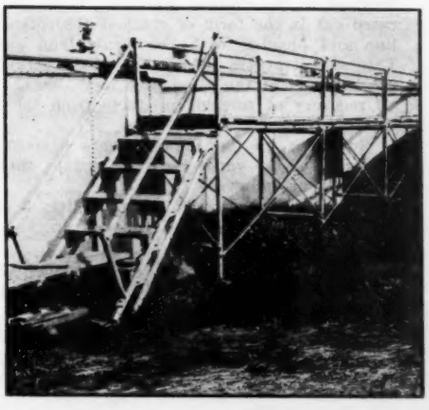
Small Air Filter Excludes Dirt From Fuel Tank



It is necessary to provide an inlet for air on the fuel tank of any internal combustion engine to permit the fuel to feed uniformly to the engine. In places where there is dust in the air trouble has been experienced because this fine material entered the fuel tank with the air and later was carried through the feed line to the engine clogging the spray nozzle. To eliminate the dust from the fuel tank one operator of Diesel engines on a drilling well in West Texas has placed an ordinary automobile engine air filter on the air intake pipe for his fuel tank with excellent results. The accompanying picture shows the method he used

Runways of Old Pipe

Old pipe was converted into a useful stair and runway for the tanks shown in picture by a rather unusual method. Instead of welding the pipe into the desired sections to form the runway and stair the ends of each piece of pipe were flattened and then drilled for bolts. The structure can be taken down and moved at little cost to the operator



Wilcox Installs New Vapor Recovery Unit and Stabilizing Equipment

By W. T. ZIEGENHAIN

THE WILCOX OIL & GAS CO. recently completed major improvements in its refinery at Bristow, Okla. These consist primarily of changes in the plant treating system, rerun equipment and the addition of a combined absorption and stabilization unit.

Acid treating has been discontinued. Sweetening and the use of an inhibitor are now the routine practice. An improvement in the antiknock rating of the finished motor fuel and a reduction in treating costs have resulted.

The improvements in rerunning consist primarily of changes in the condensing system, whereby the vapor losses from this operation are reduced. Since losses from rerunning consist largely of the more volatile and higher antiknock hydrocarbons, it followed logically that by reducing these losses the volatility and knock rating were both improved on the finished gasoline. However, the limit set by vapor pressure specifications would have been exceeded except for the fact that Wilcox included in the improvement program a complete vapor recovery unit and a stabilizer.

This unit takes into account four principal factors. The prevention of excessive losses from rundown tanks, rerun stills, treaters and storage tanks. This is accomplished by removing all propane and lighter gases from the cracked distillate continuously as same is produced. In effect this represents a step toward stabilization. As a result of this, losses subsequent to cracking are reduced materially. At the same time, the volume of fuel gas available for general use has been substantially increased.

Losses of pentane and heavier fractions with fixed gas leaving the distillate receiving tank are prevented by absorption.

Absolute control of vapor pressure of cracked gasoline is maintained at all times by stabilization. By this means the maximum content of high volatiles and high antiknock hydrocarbons are retained, consistent of course with proper vapor pressure specifications. Propane is entirely eliminated from finished product. This latter plus control of vapor pressure by stabilization produces a gasoline of high volatility and high octane which at the same time will not vapor lock.

In connection with any normal cracking operation, there are produced light hydrocarbons in excess of the amount that can be included in the cracked gasoline, since, for instance, to include all the butanes would cause the cracked gasoline to exceed commercial vapor pressure limits. However, as is true of many refineries, the straightrun gasoline produced by Wilcox was low in light ends and required the use of natural gasoline in order to improve the volatility of this product. By means of the new vapor recovery system, larger quantities of butanes are recovered than can be retained in the cracked gasoline. These are separated out in the form of cracked absorption gasoline and blended with the straightrun gasoline. This step improves the quality of the straightrun gasoline and at the same time increases the overall recovery of saleable products from the cracking operation.

Summing up the improvements derived from operation of the vapor recovery system, they may be stated as follows:

First. A reduction of approximately 3 pounds in Reid vapor pressure of finished cracked gasoline.

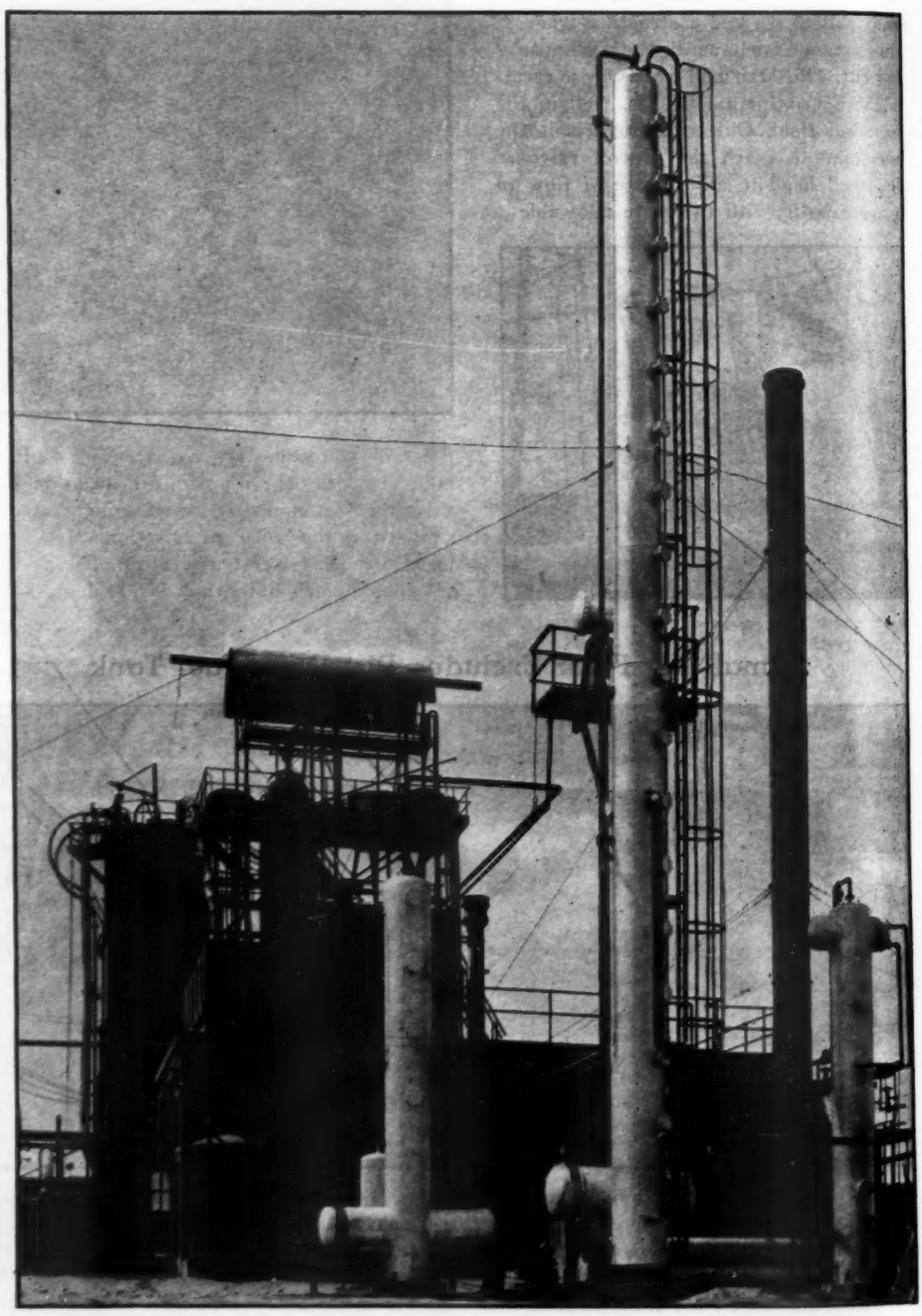
Second. An increase of 10 or 12 per cent of saleable gasoline from cracking plant. This means 5 or 6 per cent based on raw feed.

Third. An increase of about two points in octane rating. The 400° F. endpoint cracked gasoline now averages 68 to 70 octane by the C.F.R. method.

The vapor recovery system itself is quite simple as compared to the older type systems. It consists primarily of a main column 2½ feet in diameter by 64 feet tall, operated at 135 pounds and two small stripper columns, one heat exchanger, two reboilers, five coolers and condensers and one pump only, along with a complete set of instruments and controls. No compression is used.

Heat is taken entirely from the cracking operation. No steam is used since the one operating pump is driven by stripped gas on its way to fuel. The water requirement for the refinery was not increased and no extra operators are required or used. Consequently the operating cost is negligible.

The vapor recovery plant was supplied by Frick-Reid Supply Corp. It is of standard Burrell-Mase Engineering Co. design and engineered by the latter company. Erection was by the Mattison-Wallack & Co.



In the foreground is the new absorption and stabilizing equipment added to the H. F. Wilcox Oil & Gas Co.'s refinery at Bristow, Okla.

Oxidation of Motor Oils and the Effect of Tar Residue on Friction Results

By E. R. REDGROVE,
Ph.D., B.Sc., F.C.S.*

This is the concluding half of Doctor Redgrove's discussion of motor oil oxidation. The first half appeared August 8, page 34

Although it is thought that the petroleum acids formed during the oxidation of an oil are the progenitors of asphalt, they do not seem to be related in any definite way to the amount formed, a fact which is very apparent when the readings obtained on Oil W are considered.

The coefficient of static friction of Oil B was measured with the apparatus previously described, at temperatures ranging from 20° C. to 110° C.

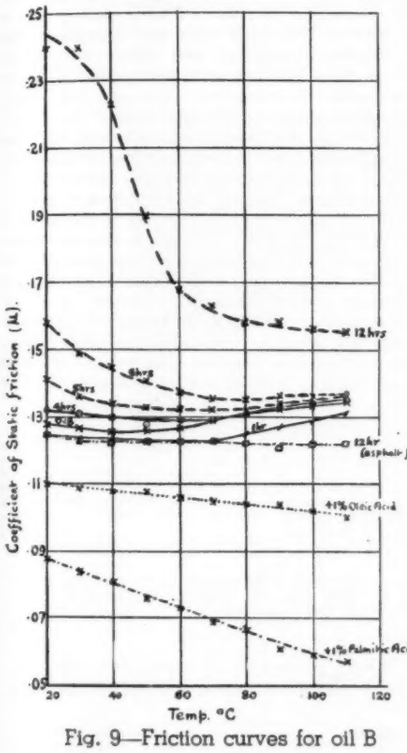


Fig. 9—Friction curves for oil B

There was a slight drop in the friction between 20° and 40°, but from 50° upwards there was a continued increases, most pronounced about 70°, with the result that the friction at 110° was about 5 per cent higher than that at 20°. This curve may be considered normal for a weakly adsorbed mineral lubricating oil. On adding 1 per cent of oleic acid to Oil B, the friction at 20° was reduced from .128 to .110, and with increase of temperature there was a gradual decline to .100 at 110°. When 1 per cent of palmitic acid was introduced, the coefficient of friction at 20° was only .0875, a reduction of over 31 per cent, this value falling steadily with increase in temperature to .057 at 110°. These results are in close agreement with those obtained in the preliminary series of tests, and clearly demonstrate that palmitic acid is greatly superior to oleic acid in respect of its power to reduce friction. Friction curves were then obtained on Oil B after it had been oxidized for 1, 2, 3, 4, 5, 6 and 12 hours. The readings on the one and two hour samples were almost identical, and slightly but appreciably below those obtained on the untreated oil, but considering that the amount of acidity in these two samples is respectively equivalent to .085 per cent and .14 per cent when calculated as oleic acid, the indication is that the petroleum acids formed under the conditions prevailing during the oxidation test do not possess in any marked degree the power of reducing the coefficient of static friction of the mineral lubricating oil from which they were formed. Due no doubt to the accumulation of asphalt, amounting to .086 per cent, in the oil, the friction curve of the three-hour sample was practically the same as that of the original oil, in spite of the fact that the acidity had increased to almost .2 per cent calculated as oleic acid. The presence of solid asphaltic matter on the bearing surfaces caused much sticking of the slider when the four, five and six hour samples were under test, particularly at temperatures below 50°, and readings were difficult to obtain, but when the temperature rose above 50°C., the asphalt seemed appreciably soluble in the oil, with the result that readings could be obtained with a greater degree of certainty, although they were appreciably above those of the original oil. After 12 hours' oxidation the difficulties increased; it was practically impossible to take any readings at all, and only in a very uncertain manner could the trend of the friction curve be indicated.

When all the asphalt insoluble in petroleum ether (I.P.T. standard was removed from the 1-, 3-, 6-, and 12-hour samples and the friction tests repeated on the asphalt free oils, the results showed that while the amount of asphalt in the one-hour sample was so small that it did not appear in any degree to influence the friction, the case was different with the 3-, 6-, and 12-hour samples. It was found that the friction of the asphalt-free oils was about the same as for the one-hour sample at the lower temperatures, but that the friction rise with increase of temperature gradually decreased until the reverse effect prevailed in the 12-hour sample. This gradual elimination of the friction/temperature rise clearly indicates the polarity of the petroleum acids, and from the fact that a considerable increase in acidity produces only a slight reduction in the coefficient of friction, it is obvious that the orientation of the acid molecules is along, and not normal to, the surfaces on which they are adsorbed. The readings obtained are given in full in Tables 3 and 4, and some of the more important features are shown in Figure 9.

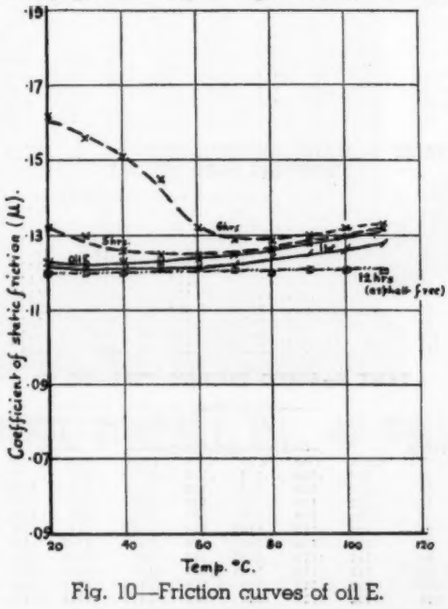


Fig. 10—Friction curves of oil E.

The friction readings for Oil E both before and after oxidation are given in Tables 5 and 6 and Figure 10. The general behavior of the oil was very similar to that of Oil B, and attention need be directed only to the fact that the absence of precipitated asphalt in the samples which have been oxidized for periods of 1, 2, and 3 hours results in the friction in all cases being below the figure obtained on the original oil.

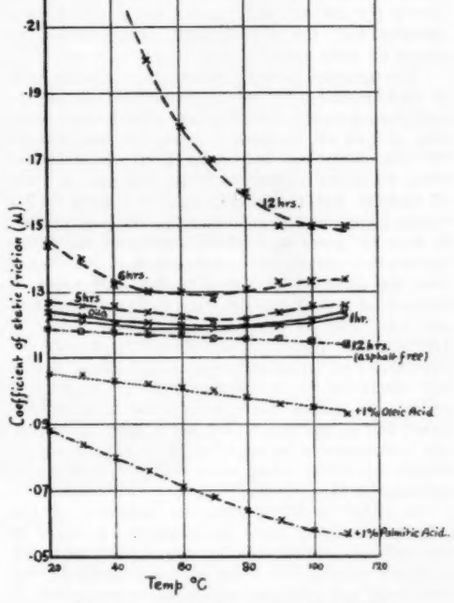


Fig. 11—Friction curves for oil G

The friction curve for Oil G was almost flat, rising only slightly between 90° and 110°, but the addition of 1 per cent of oleic acid and 1 per cent of palmitic acid produced results almost exactly the same as were obtained in the case of Oil B, the former acid reducing the static friction at 20° C. by 15.3 per cent and the latter acid by 29 per cent. After oxidizing the oil for one, two and three hours, the friction tests were practically identical, and only fractionally below the values for the unoxidized oil. After four hours' oxidation the friction was slightly higher due to accumulation of asphalt in the oil, after five hours' treatment the readings were beginning to show uncertainty, and after six hours the precipitation of asphalt was sufficient to cause much sticking of the slider, particularly at the lower temperatures. As in the case of Oil B, attempts to obtain friction values after the oil had been oxidized for 12 hours were unsuccessful. Only a vague outline of the curve from 40° C. up could be ascertained.

There being absolutely no hard asphalt formed after one hour's oxidation, the asphalt was separated from the 2, 4, 6, and 12-hour samples for further investigation of the frictional values. In general, the results were very similar to those obtained on the two oils previously examined, as

* Part of paper presented at the 164th meet of the Institution of Petroleum Technologists, London, England.

will be noted from the results given in Table 7 and 8, and in part shown in Figure 11.

The friction curve for Oil K was characterized by the same flatness as was observed in the case of Oil G. After oxidizing the oil for two hours, it was found that the coefficient of friction was slightly below that of the untreated oil, and practically the same readings were obtained on the four-hour sample. Possibly due to thickening of the oil by tar formation, the friction at 20° C. of the six-hour sample was slightly higher, being equivalent to the value of the original oil, but with increase of temperature there was a steady drop, and the value at 80° C. was the same as that of the two-hour sample. Even after 12 hours' oxidation the coefficient of friction at 20° C. was only 2 per cent higher than that of the untreated oil, and at 110° C. it was actually 3.7 per cent less. When the asphalt was removed from the 12-hour sample the friction was found to be 3.6 per cent at 20° C. and 8 per cent at 110° C. below the corresponding readings on the unoxidized oil. The superior behavior of the blended Oil K is in agreement with the results obtained by King,[7] and it would appear that the function of the residual stock is to provide a protecting influence which inhibits the breakdown of the acidic bodies formed by the oxidation of the distillate oils into lower acids and asphalt. The full results are given in Table 9, and in Figure 12 the friction curves are shown for the original oil, for the 2 and 12-hour samples and for the 12-hour sample after removal of hard asphalt.

The behavior of the nonvolatile petroleum acids is well indicated by the tests carried out on the medicinal paraffin oil (W). After six hours' oxidation of this oil no asphalt whatever was formed, but the acidity was 347 mgms. KOH per 100 gms.; after 12 hours' oxidation there was only a trace of asphalt, but the acidity had increased to 532 mgms. KOH per 100 gms. and the viscosity at 100° F. was 2.3 times that of the untreated oil. When the friction curves were determined, it was found that the oxidized oils were 28 per cent lower in friction at 20° C. that the unoxidized oil and 33 per cent and 35 per cent respectively lower at 110° C., the results being shown in Figure 13. Practically all drastically refined oils show a similar tendency to develop abnormally large acid values, the reason for which is not fully understood, but as the effect is liable to have most serious consequences in practice this feature should receive attention when assessing new methods of refining lubricating oils.[12]

In order to investigate the behavior of the volatile petroleum acids, an addition was made to the oxidation apparatus by means of which the distillate coming over from the reaction tubes was condensed and collected. Oil B was oxidized for 12 hours under these modified conditions, and aqueous and oily distillates were obtained. The acidity of the aqueous portion was found to be equivalent to 39 mgms. KOH per 100 gms. of oil treated, the solution was very reactive towards copper and readily reduced silver nitrate solution; the water-insoluble portion contained acidity, equivalent to 17 mgms. KOH per 100 gms. of oil treated, was distinctly reactive to copper, but not to steel, on the surface of which it dried after four days at room temperature to a sticky varnish-like substance. The coefficient of static friction of this distillate when fresh was approximately 4 per cent higher at 20° C. than that of the unoxidized oil.

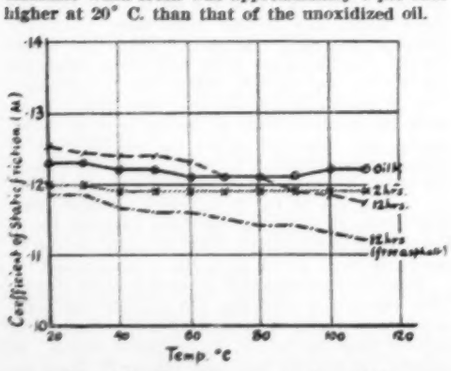


Fig. 12—Friction curves for oil K

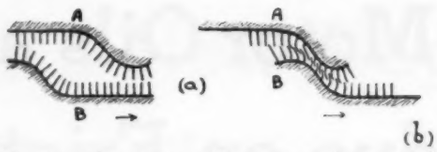


Fig. 14—Two types of bearing surfaces, each in relative motion

Consider A and B (Figure 14a) to be two bearing surfaces in relative motion, each covered by spaced adsorbed molecules of lubricant; the interspaces may be filled by weakly polar molecules which are practically unorientated. Adam[14] has stated that the hydrocarbon chain attached to the adsorbed polar groups are flexible, and therefore it may be assumed that they will bend on the approach of high spots on the bearing surfaces (Figure 14b), thereby assisting the high spots to ride over one another without metallic contact occurring. It will readily be seen that this flexibility of adsorbed molecules will be greater, the greater the normal length of the hydrocarbon chain, and it must be remembered that there are undoubtedly many degrees of secondary orientation beyond the primarily adsorbed film. This conception of flexibility, coupled with thermal vibration, explains the extremely low value of the coefficient of friction at very low relative speed observed by Hardy in the case of palmitic acid, and in the experiments under notice dealing with the mixtures containing the higher molecular-weight saturated fatty acids. The existence of so marked a temperature effect in the friction of the mixtures containing the fatty acids was unexpected, particularly as Hardy had found that there was no temperature effect when the lubricants were pure substances. It does not seem that it can in any way be connected with the thinning of the film, although Rayleigh and Hardy both found that surfaces covered with lubricating films of infinitesimal thickness had extremely low coefficients of friction, for Hardy showed that these effects were only transitory, whereas the low values obtained in the present case persisted for hours at the maximum temperature employed, 110° C.; the phenomenon may be attributed to greater mobility of the lubricating film due to the increase in the vibrations of the strongly adsorbed molecules.

In conclusion, the author wishes gratefully to acknowledge the assistance rendered by the late Professor Gibbs, the Ramsey Laboratory of Chemical Engineering, by Dr. N. K. Adam, by the Anglo-Persian Oil Co., in permitting the use of their Stanton Pendulum machine, and by the chemical and engineering staff of Snowden, Sons & Co., Ltd.

TABLE 3—STATIC FRICTION TESTS—OIL B

Temp. (° C.)	Coefficient of static friction after oxidation for						
	Oil B	1 hr.	2 hr.	3 hr.	4 hr.	5 hr.	6 hr.	12 hr.
20	.128	.125	.125	.130	.132	.141	.158	.240
30	.127	.124	.124	.128	.131	.136	.149	.240
40	.126	.124	.124	.126	.130	.134	.145	.223
50	.126	.123	.124	.126	.128	.133	.141	.190
60	.127	.123	.123	.126	.129	.132	.137	.168
70	.129	.123	.124	.128	.129	.132	.135	.163
80	.131	.125	.124	.130	.131	.132	.135	.158
90	.132	.127	.125	.132	.133	.134	.136	.158
100	.133	.129	.128	.133	.134	.134	.136	.156
110	.134	.131	.130	.133	.135	.136	.138	.155

TABLE 4—STATIC FRICTION TESTS—OIL B, AFTER REMOVING HARD ASPHALT

Temp. (°C.)	Coeff. of static friction after oxidation for			
	1 hr.	3 hr.	6 hr.	12 hr.
20	.123	.125	.123	.125
30	.123	.123	.123	.123
40	.122	.123	.123	.123
50	.123	.123	.123	.123
60	.122	.123	.122	.123
70	.125	.124	.122	.123
80	.127	.124	.122	.122
90	.128	.127	.123	.121
100	.128	.127	.123	.122
110	.130	.128	.125	.122

TABLE 5—STATIC FRICTION TESTS—OIL E

(° C.)	Coeff. of static friction after oxidation for						
	Oil E	1 hr.	2 hr.	3 hr.	4 hr.	5 hr.	6 hr.
20	.123	.122	.122	.123	.125	.132	.162
30	.122	.121	.121	.122	.124	.130	.156
40	.123	.121	.121	.121	.124	.126	.151
50	.123	.121	.121	.121	.125	.125	.145
60	.124	.121	.122	.122	.124	.125	.132
70	.125	.122	.123	.123	.125	.125	.129
80	.127	.124	.125	.124	.126	.126	.129
90	.129	.125	.126	.126	.127	.128	.130
100	.130	.126	.128	.128	.130	.130	.132
110	.132	.128	.128	.129	.132	.132	.133

TABLE 6—STATIC FRICTION TESTS—OIL E, AFTER REMOVING HARD ASPHALT

Temp. (°C.)	Coeff. of static friction after oxidation for			
	1 hr.	3 hr.	6 hr.	12 hr.
20	.122	.120	.120	.120
30	.121	.120	.121	.120
40	.121	.119	.121	.120
50	.121	.119	.121	.121
60	.121	.120	.120	.121
70	.122	.120	.121	.121
80	.123	.122	.122	.120
90	.125	.123	.123	.121
100	.126	.124	.123	.121
110	.127	.125	.124	.120

TABLE 7—STATIC FRICTION TESTS—OIL G

Temp. (° C.)	Coefficient of static friction after oxidation for							
	Oil G	1 hr.	2 hr.	3 hr.	4 hr.	5 hr.	6 hr.	12 hr.
20	.124	.122	.121	.121	.123	.127	.144	>0.3
30	.123	.121	.120	.121	.122	.126	.140	>0.3
40	.121	.120	.120	.120	.120	.126	.132	.3/.25
50	.121	.119	.118	.119	.120	.124	.130	0.2
60	.120	.119	.119	.118	.119	.122	.130	0.18
70	.120	.119	.119	.118	.119	.121	.128	0.17
80	.120	.120	.119	.119	.121	.122	.131	0.16
90	.120	.120	.121	.121	.122	.124	.132	0.15
100	.122	.121	.123	.123	.123	.126	.133	0.15
110	.124	.123	.123	.125	.125	.126	.133	0.15

TABLE 8—STATIC FRICTION TESTS—OIL G, AFTER REMOVING HARD ASPHALT

Temp. (°C.)—	Coeff. of static friction after oxid. for			
	2 hr.	4 hr.	6 hr.	12 hr.
20	.118	.118	.119	.119
30	.118	.118	.119	.118
40	.118	.118	.118	.118
50	.118	.118	.118	.117
60	.118	.118	.117	.117
70	.119	.118	.118	.116
80	.120	.119	.118	.116
90	.120	.119	.118	.116
100	.121	.120	.119	.115
110	.123	.121	.119	.114

TABLE 9—STATIC FRICTION TESTS—OIL K

Temp. (°C.)	Coefficient of static friction — After oxidation for				After removing hard asphalt	
	Oil K	2 hr.	4 hr.	6 hr.	12 hr.	6 hr.	12 hr.
20	.123	.126	.121	.123	.1255	121	.1185
30	.123	.126	.120	.123	.1245	.120	.1185
40	.122	.119	.120	.122	.124	.120	.1165
50	.122	.119	.119	.121	.124	.119	.116
60	.121	.119	.1185	.121	.123	.119	.116
70	.121	.119	.1185	.120	.121	.1185	.115
80	.121	.119	.1185	.119	.121	.1185	.114
90	.121	.119	.1185	.119	.119	.1185	.114
100	.122	.119	.119	.119	.1185	.1175	.113
110	.122	.119	.119	.119	.1175	.1165	.112

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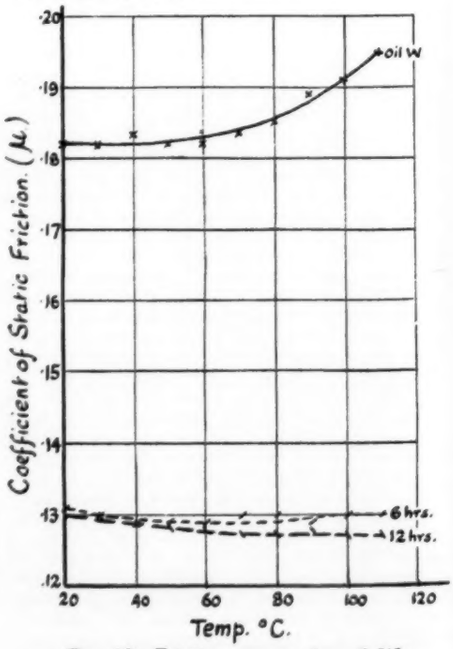

Fig. 13—Friction curves for oil W

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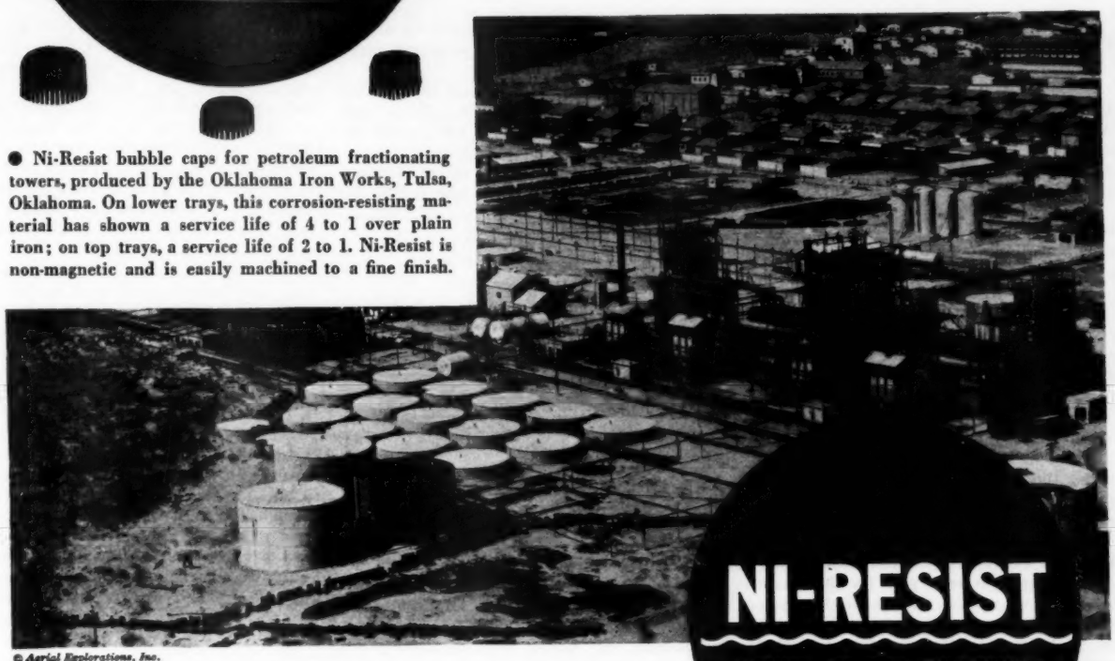

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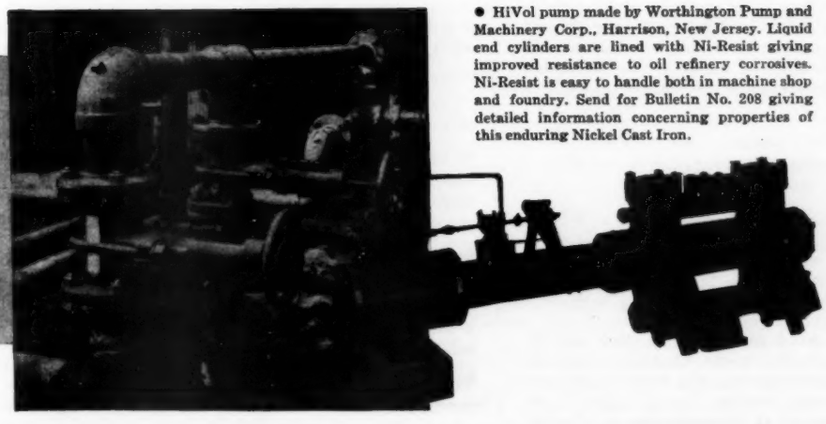

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Selective Wetting of Reservoir Rocks and Its Relation to Oil Production

By ALLEN D. GARRISON
Rice Institute*

THE SURFACE TENSION OF A liquid is a measure of the tensile strength of its surface film. It is expressed in dynes per centimeter length of the film. The interfacial tension between two liquids is likewise the tensile strength of the film separating the liquids, and is also expressed in dynes per centimeter length. These quantities are easily measured. The forces which cause the spreading of a liquid over a solid work in opposition to the surface tension, and are not so easily measured.

Figure 1 represents a diagrammatic analysis of the forces acting at the contacts of water and oil on silica. One of the forces tending to prevent the spreading of the water over the silica thus displacing the oil is the interfacial tension ($S_{2\,3}$) at the oil-water interface. Its force component in the plane of the silica surface is $S_{2\,3}\cos\theta$. The other force tending to prevent the spreading of the water is indicated ($S_{1\,3}$), and is an interfacial tension between water and silica; while the force marked $S_{1\,2}$ is the force tending to cause the spreading of the water layer under the oil, and is also an interfacial tension, oil-silica. It is not possible to measure either of these forces representing the interfacial tensions between solids and liquids, but it is possible to measure the difference between them, ($S_{1\,2}$-$S_{1\,3}$), which is all that is necessary to fix the conditions of equilibrium or motion. If the interfacial tension of the oil-silica contact less the interfacial tension of the water-silica contact is greater than the interfacial tension of the water-oil contact, then the angle θ will become 0, and the water will advance over the surface of the silica—displacing the oil as it moves. If this is not the case, equilibrium will be set up at some definite angle of contact as expressed by the equations in Figure 1.

Since it is not possible to measure the interfacial tensions of the solid-liquid contacts, a quantity defined as "adhesion tension" is measured. The adhesion tension of the water-silica contact is the difference between the surface tension of the solid against air and the interfacial tension water-silica—two quantities which cannot be measured separately, but whose difference can be determined. When similarly, the adhesion tension for the oil-silica contact is measured, it may be seen that the difference between these terms is the difference between the indeterminate interfacial tensions in Figure 1. Thus:

$$\text{Adhesion tension, } \frac{H_2O}{SiO_2} = A_{1\,2} = S_1 - S_{1\,2}$$

$$\text{Adhesion tension, } \frac{H_2O}{SiO_2} = A_{1\,2} = S_1 - S_{1\,2}$$

$$\text{Then: } \quad A_{1\,2} - A_{1\,2} = S_{1\,2} - S_{1\,2}$$

If water-wet sand is packed in close contact with oil-wet sand, the water (having a greater affinity for the sand than the oil) tends to advance into the oil-wet sand, driving the oil before it. If the oil cannot escape, it is compressed to a point where the differential pressure between the oil and water bodies is just sufficient to check the advance of the water. This equilibrium pressure of displacement has been the subject of a number of investigations, chiefly by Bartell and his students.[1a] These workers have used various types of displacement cells, have studied the effects of various degrees of compaction of the solid grains in the cells, and have measured the pressures of displacement under conditions of both slow and rapid advance of liquid columns.

Other investigators, notable among them being McMillen,[2] Harkins and Dahlstrom,[3] Davis and Curtis,[4] and Weber and Chatterji,[5] have made investigations of similar or related nature.

Some of the materials known to occur in reservoir rock have been investigated, and fairly accurate adhesion-tension values are known for various liquids against these solids. Most important among these is silica. Bartell and Osterhof[1] have given a corrected summary of the adhesion tensions of many organic liquids against purified silica, and Bartell and Miller[1] have measured the adhesion tensions of 13 crude oils selected to represent oils of all known types against purified silica. Some data is available on Al_2O_3, PbS, CaF_2, and $BaSO_4$. Only estimated values are available on clay, feldspar, the alumino-silicates of the metals, and the materials which form the cementing agent in sand horizons.

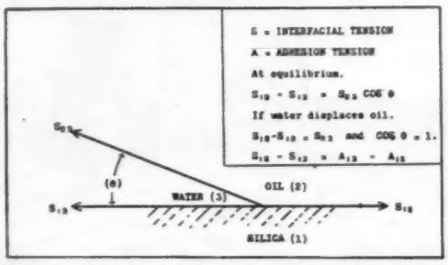

Fig. 1—Interfacial forces acting at the contact of water, oil and silica

It is the purpose of this paper to summarize briefly the results of these investigations which, in the author's opinion, have a direct and important bearing on certain phases of the production of oil, and to suggest a theory for the distribution of water throughout the reservoir.

Some of the more accurately known values for materials known to exist in reservoir rock are grouped in Figure 2 in the form of an interfacial-tension chart. The lengths of the horizontal lines

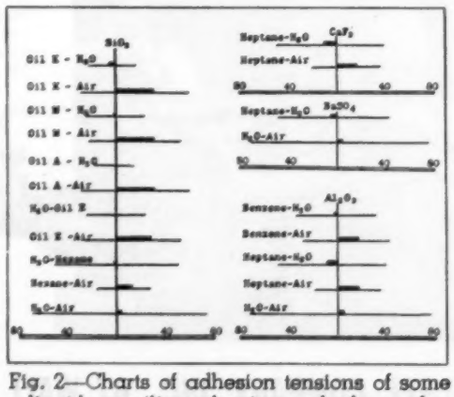

Fig. 2—Charts of adhesion tensions of some liquids on silica, alumina and other rock

in this chart represent the effective tensile strength of the film at the interface of the materials written on the line, in terms of dynes per centimeter length on scale at base of each group of lines.

For example, the length of the first line at the bottom of the silica chart gives the result of the forces acting in the spreading of water over silica displacing air. The line to the left is the surface tension of the water, 72.1 dynes per cm. The line to the right is the adhesion tension of water against silica, 76.7 dynes per cm., which is the difference between the unknown surface tension of the solid silica and the unknown interfacial-tension water-silica. The force to the right is the spreading force, that to the left the force opposed to spreading (Figure 1). It may be seen that the difference is 4.6 dynes per cm. in favor of spreading. This resultant force is indicated by the heavy line 4.6 divisions to the right.

The next line above presents the data for hexane. The surface tension of hexane is 18.2 dynes per cm., the length of the line to the left; while the adhesion tension of hexane against silica is 25.9 dynes per cm., the length of the line to the right. The difference, 13.7 dynes per cm., the length of the heavy line to the right, is the resultant force in favor of spreading.

The third line from the bottom on the silica chart summarizes the forces acting when silica, water, and hexane are brought together. The line to the left is the tensile strength of the interfacial film between water and hexane, viz., 51 dynes per cm. The line to the right is the difference between the adhesion tensions of the two liquids against silica; and is, therefore, the spreading force, 50.8 dynes per cm. Notice that in this case the spreading force is less than the restraining force, and that the water does not spread under the hexane, but sets up an equilibrium such that the cosine of the contact angle is:

$$\cos\theta = \frac{50.8}{51}$$

Thus in all those cases in the charts of Figure 2, where the resultant force is indicated by a heavy line to the left, cosine of the angle of contact is less than one—and for all those combinations of forces where the resultant is to the right, the cosine of the angle becomes greater than one, and spreading occurs of the liquid having the larger adhesion tension.

Among the 13 oils measured by Bartell and Miller, the smallest value of cos θ was 0.5823; 10 were above 0.80; 3 were above 0.95—indicating that even in the cases of crude oils having high adhesion tensions, and proportionately high interfacial tensions, the affinity of the sand for the water is much greater than the affinity of the sand for the oil.

Data for the adhesion tensions of crude oils on other solids of the reservoir rocks are not yet at hand. But enough information is now available to show that the values for all the polar solids of the reservoir rock will not differ appreciably from silica. A portion of this evidence may be seen in the adhesion-tension charts for alumina, fluorite, and barite (Figure 2). Further evidence on this point may be had from a paper by Bartell and Walton[6] in which comparisons are drawn between the surface energies of a number of polar solids. Chemical evidence may be presented to indicate that materials such as clay, aluminosilicates of the metals, and hydrated silicic acid which form part of the cementing materials of reservoir sands will be found to have even greater affinity for water, and less for oil, than purified silica.

It has been recognized that the capillary spaces of producing sands are as a rule much too small to permit the complete settling of the water to a position below the oil, as it does in larger containers. Many geologists have recognized the capillary effect in the problem of the origin and accumula-

*Presented at A.P.I. meeting.
[1a] Figures refer to bibliography at end of article.

tion of the oil in the reservoir; notable among these are the following who have contributed both ideas and experimental data: Gilpin and Cram,[7] Washburne,[8] Cook,[9] McCoy,[10] Nutting,[11] and Illing.[12] Nutting has shown that by far the greater number of producing sands have grain sizes between 0.009 cm. and 0.021 cm., and that the maximum pore space in these sands has a mean diameter of about one-fifth of the mean diameter of the grain, or radii of sizes from 0.0009 cm. to 0.0021 cm. If one considers fairly uniform sand grains packed together in the reservoir as in Figure 3, it may be seen that there are spaces near the points of contact of the grains where the distance across the pore is much less than these estimates of Nutting. Where smaller grains fall into the pore space between the larger grains, the effect is also to reduce the effective pore radius by a large factor.

If oil is forced into a sand of this type in which the spaces have been previously filled with water, the water does not fall below the oil as in a bottle or pipe, but sets up an equilibrium with the oil much as is represented in Figure 3, in which the effect is exaggerated in the drawing. The dotted line at the bottom represents the noncapillary oil-water level, i.e., the level to which the oil would drive the water if it were not for the capillary retention of the water due to the greater affinity of the silica. The column of oil advancing in the pore at A, B, C, D is not able to drive the water back completely into the minute space between the grains, even if the escape of the water to a lower level is unobstructed; since, to do so, the oil must oppose the interfacial tension of the film between the oil and water. The farther back into the space between the grains the film recedes, the greater is the differential pressure developed by it; for its radius of curvature must be reduced. The relation between the curvature and difference in pressure on opposite sides of the film is given by equation:

$$P_i - P_o = \frac{2I}{r'}$$

where P_i is the pressure on the concave side of the film, P_o is the pressure on the convex side of the film, I is the interfacial tension of the film, and r′ is the radius of curvature of the film.

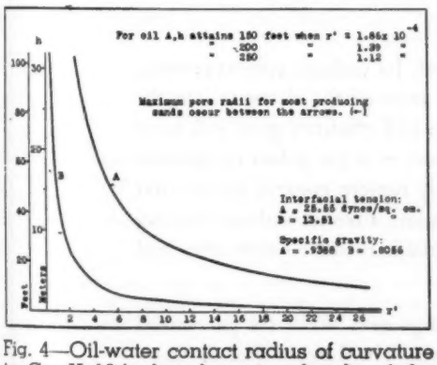
For oil A, h attains 180 feet when r′ = 1.66x 10⁻⁴
" 200 " " 1.39 "
" 280 " " 1.12 "
Maximum pore radii for most producing sands occur between the arrows. (—)
Interfacial tension:
A = 25.65 dynes/sq. cm.
B = 13.81 " "
Specific gravity:
A = .9388 B = .8086
Feet
Meters
r′

Fig. 4—Oil-water contact radius of curvature in Cm X 10^{-4} plotted against height of the contact above the non-capillary level

Thus an equilibrium is set up in any crevice between sand grains between the force of gravity tending to pull the denser liquid down and the pull of the interfacial film with its convex side toward the water. It may be shown that these forces are in equilibrium and the water no longer tends to recede downward when:

$$r' = \frac{2I}{h\,(d_w - d_o)\,g}$$

where h is the height above the noncapillary oil-water level, d_w is the density of the water, d_o the density of the oil, g the acceleration of gravity, I the interfacial tension of the oil-water contact, and the r′ the equilibrium radius of curvature. Note that the adhesion tensions do not appear in this equation. The adhesion tensions determine the angle of contact of the water film with the silica surface, and thus fix the relation between the radius of curvature of a pore which is just filled with water and the radius of curvature of the film in the pore, thus:

$$r'' = r' \cos\theta$$

where r″ is the radius of curvature of a pore which is just filled with water, whose interfacial contact has radius of curvature r′, and cos θ is determined by the adhesion tensions.

At the point indicated by the dotted line in the reservoir, all the pores are filled with water, however large the pore. At the height h_3 or h_4, whether or not a pore is filled with water or oil depends on its size, the interfacial tension of the oil-water contact, the adhesion tensions of the liquids against the material of the pore wall, the densities of the liquids, etc. In general, we may say that, if the angle θ is 0, then all the pores whose effective radii

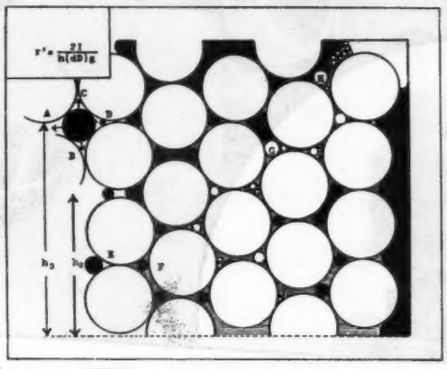

Fig. 3—Effect of height on the curvature of oil-water contacts in sand

are equal to or less than r′ in the above equation are filled with water, and all larger pores are filled with oil. If the angle θ is not 0, then all pores whose effective radii are equal to or less than (cos θ) r′ are filled with water, and larger pores are filled with oil. The greater the elevation in the reservoir, the smaller the pore space must be to retain water; but the elevation must be infinitely great to exclude all the water from the minute spaces at the contacts of the grains.

The volumetric ratio of the water to the oil must bear some relation to the radius of curvature. This will depend on the shape of the sand grains and the nature of the contacts, and the relation is obviously complicated; but preliminary estimates indicate that the volume of the water should decrease somewhat more than the third power of the radius of curvature of the contact of oil and water. Thus the volume of water in the reservoir should decrease somewhat faster than the third power of the elevation above the noncapillary oil-water level.

It is noteworthy that the effect of the nature of the oil, through the value of the interfacial tension I, as well as through the value of the angle θ, may determine the amount of water in the capillaries of the reservoir to an even greater extent than the nature of solid materials in the reservoir rock.

Figure 4 presents a summary of calculations of actual radius of curvature at different elevations in a sand reservoir containing water and oil. Two samples of oil are chosen from the 13 representative crude oils investigated by Bartell and Miller. The curve A represents the oil which, because of its relatively high density and interfacial tension, gives the largest value of r′ and, therefore, the largest amount of equilibrium water at any given level in the sand. The curve B presents the data level in the sand. The curbe B presents the data for the oil having the opposite qualities, i.e., low relative density and interfacial tension, such that it represents about the minimum that may be expected for values of r′. Arrows have been placed above the sizes of the pores which Nutting has defined as the limits of the majority of producing sands. These values are, of course, maximum pore radii; for where the grains come into contact, the spaces are much smaller.

The cementing material between the sand grains has the effect of creating pores much smaller than those measured by Nutting. This, and the fact that the grain sizes are not uniform, makes it impossible to estimate the relative volumes of the pores of different sizes. If, however, it is assumed that the volumes of the pores decrease roughly as the third to four power of their radii, then it may be seen that even at appreciable elevations above the noncapillary oil-water level much water may remain in the sand crevices. Thus, in the case of oil A, at an elevation of 250 feet, all the pores up to those larger than 1×10^{-4} cm. are filled with water. Yet this radius is only one-eighth of the largest pores in fine producing sands, and one one-twentieth of the largest pores in the coarse producing sands. Even if the adhesion tensions are such that the angle of contact of the water-silica line is not 0, the values of r″, or the radii of the pores actually filled with water, will not be less than the values of r′ in Figure 4 by a factor to exceed 20 per cent in most cases.

Evidence has been obtained by Fettke[13] that sands contain appreciable water, even in cases where the completed wells produced only oil.

Torrey[14] and Mills and Wells[15] have considered the problem of the distribution of oil, water, and gas in reservoirs; and Torrey concludes that the distribution of the water is not one of recent origin, but represents a condition which was obtained at about the time the reservoir was filled with oil. This view is also in accord with that of McCoy,[10] who believes that the reservoir was originally filled with water, and that the oil entered by the capillary repulsion from source beds of shale or clay where the pores are smaller than those in the reservoir. Illing[12] explains the motion of the oil in a different way, but the predominance of opinion postulates that the original reservoir rock was water-wet prior to the entrance of the oil. This condition would undoubtedly favor the minimum of contact angles between water and reservoir rock, and the retention of maximum water consistent with equilibrium.

Since the oil occupies the larger pores of the reservoir rock, the potential gradient set up by a producing well will tend to move the oil toward the well bore in preference to the water. However, it may be seen that the drop in pressure in the oil column toward the well will be transmitted to the water capillaries. The well bore itself may be regarded as a new point of noncapillary oil-water

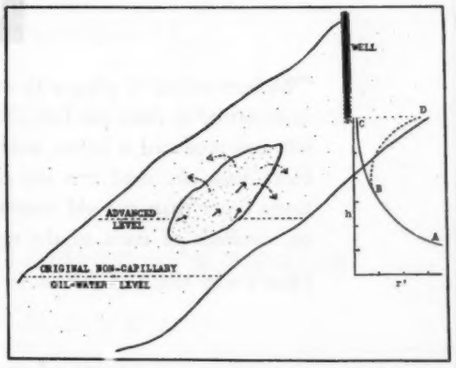

Fig. 5—Effect of rate of production of oil on recovery from sand lenses, and on the radius of curvature of the oil-water contacts

contact. The result may be represented diagrammatically in Figure 5. The line ABC in the small chart below the well represents the original distribution of curvature of oil-water contacts before the pressure gradient was set up by the flowing well. The line ABD represents the condition after production establishes a pressure gradient. From A to B the original distribution of oil to water is only slightly effected; but as the flow increases and the pressure drops toward the well, the equilibrium radius of curvature again becomes larger, approaching infinity in the well bore itself.

If the well is shut in after a year or more of production, and the bottom-hole pressure measured, it should be found to have decreased (disregarding any lowering of gas pressure). This decrease in bottom-hole pressure would be most simply explained by stating that the well bore is now at the head of a column of water where it formerly was at the head of a column of oil; and, furthermore, it is much more difficult for the oil to advance to

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the well bore to raise the pressure, since it must do so through capillaries whose sizes have been reduced by the advance of the water. Following this view, it is not necessary to assume that a rapid reduction of bottom-hole pressure is evidence of a gas drive.

This theory is also in accord with the fact that elevation of the well above others in the field does not prevent the production of water from it in advance of wells that are regarded as nearer the so-called "edge water." High rate of production is a factor which often overshadows elevation.

The influence of wettability of the reservoir material on the recovery from sand lenses of small pore size is illustrated in Figure 5. It has been demonstrated by Wilde and others[32] that rapid production is likely to pass up the oil in tightly-packed sand lenses, and Gill even states that this oil will be trapped in the tightly-packed sand lenses in amounts which are totally uninfluenced by the rate of production.[33] The experiments of Wilde were such as to resemble conditions of very rapid advance of water, and the trapping of the water was simply bypassing due to differential permeability. The exact reverse must be the result if the advance of the water is slow enough to permit the equilibrium to set up and if the wetting characteristics of the sand are similar to those being considered; i.e., the pores of the tightly-packed sand will fill more completely with water than the larger pores of the surroundings. The slow advance of the water would drive the oil from the sand lense to the coarser structures, as indicated by the arrows in Figure 5. Thus, at some stage in the curtailment of the production, the loss of the recoverable oil to the lenses by by-passing becomes a gain from these lenses by more complete equilibrium between the water and oil in pores whose dimensions favor the displacement of the oil.

By a similar process of reasoning, it may be shown that a well producing from sand having relatively large pores is in a more favorable situation to prevent water encroachment than a well producing from a position in the reservoir where the pore sizes are smaller—even though the latter well may be situated higher in the structure or farther from the position in the reservoir where water entrance is taking place.

In short, this theory considers that the water is advancing toward the producing well by wick action, as contrasted with those ideas of more or less definite edgewater levels advancing in planes, noses, or cones.

Rapid production increases the water content of the reservoir below the well bore at the expense of the oil content. This promotes the early production of water, whereas slow production retards the water and promotes recovery of oil.

The advance of the water below a producing well is by wick action—the water advancing from the smaller pores into the larger pores, rather than advancing from below in planes, noses or cones. This type of water displacement causes a reduction in bottom-hole pressure due to changes in the radii of curvature of the oil-water contacts which would cause the water drive to resemble a gas drive.

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Salvaging of Producing Equipment in West Texas Damaged by Corrosion

MUCH HAS BEEN CONJECTURED about the destructive effect of sulphur compounds in gas and oils produced in the Big Lake Field, Reagan County, Texas, but it remains for Robert W. Harrison, office engineer, Group No. 1, Oil Corp., Texon, Tex., to complete data covering abandoning operations of a sufficient number of the shallow wells in the field to give a comprehensive idea of the damage done to pipe and equipment. This article was printed in Colorado School of Mines' "The Mines Magazine" for June and is reprinted here with acknowledgements to the author and the magazine.

This article presents the methods used, cost statements and salvage values in plugging and abandoning pumping wells in the Big Lake Field of Reagan County, Texas.

To date, 22 shallow pumping wells have been plugged and abandoned on the 640-acre University Lease of the Group No. 1 Oil Corp. This group comprises 28 per cent of all such wells drilled on the lease.

The wells plugged were drilled with cable tools to an average depth of 2900 feet and were completed within the period of May, 1925 to July, 1928. All wells were placed on the pump when drilled in.

TABLE 1.—SURFACE EQUIPMENT SALVAGED

No. wells data avail.	Item or group—	Con. B	Cond. C	Cond. D	Cond. E	Av. per well % new value
21	Belt hall, motor house, floor and rod walk	3	7	14	76	9
21	Motor and control	100	..	..	..	75
21	Jackshaft and pulleys	95	5	..	..	74
21	Belts	..	..	..	100	0
21	Bandwheel and crank	4	29	..	67	18
21	Bullwheels	100	..	..	..	75
22	Derricks	100	..	..	..	75
22	Crown blocks and sheaves	57	30	..	13	58
21	Rig fronts	33	19	..	48	34
21	Beam, Pitman and counter-balance	..	..	10	90	3
21	Sills and posts	2	1	14	83	6
21	Switches and wiring	11	..	9	80	11
22	Flow lines, valves and fittings	2	..	..	98	1½
22	Miscellaneous accesories	..	..	..	100	0

The casing program followed was not uniform. On some wells part of the pipe was pulled at the time of completion leaving from two to four strings in the hole until plugged.

A brief resume of abandoning procedure is as follows: Sucker rods and tubing are pulled, the standing valve removed, and open-end tubing run back into the hole for use in cementing. The face of the pay formation is then plugged off to the bottom of the inner or flow string of casing, as required by the Texas Railroad Commission. The tubing is removed and dismantling of surface equipment begins. Company labor is used throughout this first stage, the derrick only being cut down by a rig-building contractor.

The plugging contractor then moves on location to pull casing and complete the plugging of the well. After he has removed all possible pipe the plugger fills the hole with mud-laden fluid to within a few feet of the top and applies pressure. A cement plug is then placed to the surface, the location cleaned up and surface restored to that of the original condition.

Casing is pulled with hydraulic jacks operated by a double-acting triplex reciprocating pump mounted on a truck. The pump is operated by chain drive from a power take-off on the truck transmission. The grip on the casing is made by four-piece slips set in a spider which in turn is supported by the jack cylinders. Another set of four-piece slips is placed in a stationary spider at the base of the jack cylinders; these hold the pipe until the jacks are lowered to obtain a new grip. The hydraulic jacks have a lift of approximately 6 feet at a time.

Each joint is broken out with a set of tongs operated directly from the power take-off through universal joints. The pipe is handled to the rack by means of a cat-head and mast.

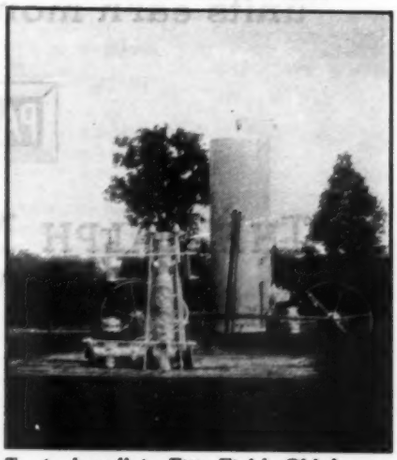
The most important item in abandoning work is the recovery of casing, the plugging contractors doing their work for a percentage of the pipe they are able to pull. The charge ranges from 30 to 37½ per cent, varying according to the number of strings in each well plugged. For example, one contractor would pull two-string wells for 37½ per cent and three-string wells for 35 per cent. It is also common practice for contractors to plug wells on a cash basis, charge being made per foot of pipe pulled with a day-work charge for plugging. No wells on this lease, however, were plugged on a cash contract.

TABLE 2.—CASING RECOVERED FROM 22 WELLS

Well No.	12½" Casing B	C	E	Z	10" Casing B	C	E	Z	8¼" Casing B	C	E	Z	6⅝" Casing B	C	E	Z	5 3/16" Casing B	C	E	Z
11		NONE				NONE				NONE			87	..	5	8	70	30	..	..
14*		NONE				NONE			10	5	12	73	63	..	4	..	79	..	16	5
15	..	..	100	..		NONE				NONE			90	..	2	8	92	8	..	..
18		NONE				NONE				NONE			39	36	..	25	..	100	..	..
19		NONE				NONE				NONE			59	..	5	36	83	17	..	..
22	..	..	100	..		NONE			..	..	100	..	54	..	11	35	55	9	..	36
23		NONE				NONE			..	19	13	68	75	23	2	.	64	34	2	..
28		NONE				NONE			..	..	40	60		NONE				NONE		
29		NONE				NONE			..	..	100	..	43	6	..	51	90	10	..	..
38		NONE				NONE			60	32	..	8	77	9	2	12		NONE		
47		NONE				NONE				NONE			10	..	6	84	84	16	..	..
50		NONE				NONE			24	16	10	50	98	..	2	..		NONE		
51		NONE				NONE			..	11	4	85	86	13	1	..		NONE		
59	..	..	14	86		NONE			24	59	4	13	64	35	..	1		NONE		
61		NONE				NONE				NONE			9	..	14	77		NONE		
65		NONE				NONE			..	10	5	85	79	10	..	11	74	26	..	..
2A	55	..	..	45		NONE			90	..	10	..		NONE				NONE		
5A		NONE			..	47	44	9	94	3	..	3	96	4	..	..	71	20	..	9
6A		NONE				NONE				NONE			56	2	..	42	78	11	..	11
7A		NONE			..	13	..	88	80	6	..	14		NONE				NONE		
9A		NONE				NONE				NONE			59	24	3	14	78	8	3	11
10A		NONE				NONE			83	16	15	16	74	6	2	18	68	11	..	21

*32% of the 6⅝" casing in well No. 14 recovered in condition "X".

Well in Fitts Pool



Typical well in Fitts Field, Oklahoma, showing christmas tree with retractor head, casing and tubing floor connections and adjustable choke

All material, both surface and subsurface, is classified as follows:

"A"—New, 100 per cent value.

"B"—Good condition, second-hand, 75 per cent of new value.

"C"—In need of repairs, second-hand material, 50 per cent of new value.

"D"—Near junk but of some value, approximately 25 per cent of new value.

"E"—Junk, of no value.

"X"—Casing and tubing good for line pipe only, valued at 75 per cent of new line pipe.

Of the 22 wells to be considered, 21 were produced by pumping on the beam with electric motor as prime mover; one was a pumping jack well operated from a central power. Since the major portion of the plugged wells were beam wells, the discussion of surface material will be limited to that type.

TABLE 3.—SUBSURFACE MATERIAL SALVAGED

No. wells data avail.	Item or group—	Cond. B	Cond. C	Cond. D	Cond. E	Av. per well % new value
22	Casing clamps	..	..	..	100	0
21	Sucker rods	..	..	..	100	0
21	Traveling and standing valves	5	..	..	95	4
21	Working bbl., mud and and gas anchor, and perforated nipple	..	..	..	100	0
22	Casing shoes	13	10	..	77	15
					Cond. X	
22	Tubing	8	8	..	6	78 33

The belt hall and motor house, flow lines, counter-balance, pitman, beam, sills and posts, belt, valves and fittings, and accessories including stuffing box, polished rod, tubing board and line, polished rod grip, beam sheave and hanger were almost entirely removed in condition "E", junk.

The corrosive nature of the sulphur gas and salt water produced with the oil accounted for the junking of many metal parts exposed to its action. Some of the above-mentioned material, however, was sold to junk dealers and a part retained for use in repair work on active wells. These junk sales brought only a small sum but helped considerably in cleaning up the locations.

Practically all motors, control units, and jackshafts were salvaged in condition "B", as were the derricks and bull wheels. This group constitutes the most valuable of the surface equipment. Steel crown blocks were salvaged in condition "B" while those of wood were removed in various conditions, few crown sheaves carried other than "B" value.

A feature of the casing recovery on this lease was the fact that the pipe was not cemented but mudded when set.

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PROBLEMS FROM READERS

Edited by T. F. Smiley

Trying to Make Fast Drilling Time May Be Expensive in the End

It seems to me that altogether too much emphasis is placed on speed in drilling. Taking into consideration all the work that has to be counted as going into the completion of a well (moving the rig, fishing, repair jobs, etc.), can you give me a fair estimate of what proportion of the time is spent in actual drilling?—R. T. E.

Quite clearly you are right in your belief that time saved by overconcentration of effort in the direction of drilling speed is likely to prove expensive. In view of the fact that making drilling speed the primary consideration cannot reduce the total costs more than about 4 per cent anyway and that there is great danger of excessive speed causing damage, the uselessness of trying to lower the costs by increasing the speed seems obvious.

It is apparent, too, that any advantage gained by speeding up the drilling operation is more than counterbalanced by the possibilities of trouble. For instance, one extra fishing job may wipe out all the benefits obtained by fast drilling of several wells. Nobody, presumably, will deny that excessively fast drilling is one of the surest ways of inviting fishing jobs which may be costly.

As to the proportion of time spent in the actual drilling operation, it has been estimated that about 10 per cent of the driller's time is devoted specifically to the job of making hole, the rest of the time being consumed in moving rig, rigging up, running in and out, repairs, fishing jobs, etc.

Is the Well Drilled on Proved Oil Land Certain to Find Oil?

I often see references to "proved oil land." Does this term mean land where the owner is sure to find oil if he drills a well? Does it mean the same thing in all the different oil areas of the country? If you get land or an oil lease in what is represented to be proven territory and then you fail to find oil when you drill, would that nullify the lease?—D. O. S.

Proved oil land is land on which wells already completed, along with other ascertained conditions, make it virtually (but not absolutely) sure that any additional wells will produce oil in profitable volume. The term means the same thing in all the different oil areas of the country, though of course it is to be accepted with reservations when it is found in the literature of oil companies organized chiefly to sell stock to the gullible.

Proved oil land, probable oil land, prospective oil land and worthless territory are defined in a government bulletin by Carl H. Beal on "The Decline and Ultimate Production of Oil Wells." Mr. Beal says "proved oil land" should be applied to areas in which virtually no risk is involved in drilling, though the precise meaning of the term will be influenced by local conditions. He goes on:

"All of some quarter-sections on which only one well has been drilled may be called proved oil land, even though it may not be surrounded by wells. Other tracts, on the contrary, before they could be considered proved would require many tests. In drilling such wells, 'Every well is a wildcat well,' to use an oil field saying.

"The following definition of proved oil land has been modified from that given by the California State Mining Bureau: 'Proved oil land is that which has been shown by finished wells, supplemented by geological data, to be such that other wells drilled thereon are practically certain to be commercial producers.'

"Probable oil land, as the name implies, includes those areas where from geologic inferences as to the structure and the continuity of the sand, and from the information obtained by drilling, the chances favor the finding of oil, although uncertainty may attach to drilling on such land.

"Prospective oil lands include those areas, classified entirely by geologic observations, on which all available evidence indicates the possible presence of oil in commercial quantities.

"Worthless territory is that which has been proved nonoil-bearing by drilling, or that in which from geologic observations the chance of obtaining a profitable yield of oil is remote.

There is no clause in the ordinary oil lease, whether verbally represented as "proved" or not, which would give the lessee ground for action or affect the legal character of the lease in any way if the drill should fail to find oil, but failure to make rental payments would nullify the lease.

Readers are invited to send questions relating to drilling, producing and transporting operations. These questions will be placed in the hands of persons capable of answering them authoritatively. The names of those writing for information will be considered confidential, initials only being published. This department cannot undertake to answer questions involving patents or intricate formulas or those which properly should be submitted to consulting engineers or geologists.

WHY THEY CALLED IT *Gantry*

To the engineer a gantry (also spelled gauntry) usually is a frame structure, raised on side supports so as to span something, commonly of large dimensions. It may be also a bridge or platform carrying a crane or winch and supported by a pair of towers or by trestles running on parallel tracks. Originally it meant "a wooden frame on which beer casks are set when tunned," and Dr. Samuel Johnson so defined it more than a century and a half ago. An old poem has the lines:

At Hallowtair where brousters rare
Keep guid ale on the Gantrees.

The word still is used in a similar sense to designate a frame for supporting barrels. It has been suggested that it was derived from "gaun," a tub, and "tree."

Decreasing Water Content of Crude Raises Pipe Line Efficiency

It is recognized of course that the higher the water content of the crude carried through a pipe line the less efficient the operation of the pipe line is and the greater the danger of corrosion. It is impracticable, I suppose, to eliminate the water cut completely, but I would like to know how high a percentage of water and other impurities the large pipe line companies allow their lines to carry. Also can you tell me what method is used to ascertain what percentage of water there is in any particular run of crude?—T. E. F.

Some of the large pipe line companies which formerly made it a rule not to run crude containing more than 3 per cent of water or other impurities have been arriving at the conclusion that this maximum is too high and have shown a disposition to reduce it to 2 per cent. It is regarded as highly desirable from the viewpoint of the transportation division to reduce the cut to 1 per cent or less by dehydration or otherwise. In fact some major companies urge their production departments to do this wherever possible.

Reduction of the quantity of water and other foreign matter removes to just that degree the necessity of using the pipe line for carrying worthless material. Furthermore, as you yourself indicate, salt water and accompanying compounds are corrosive to pipe lines and stills and by shortening the life of equipment they inevitably increase the costs of transportation and refining.

When crude oil is shipped by tanker it has been found advisable to keep the water content down to at least 1 per cent because even a 2 per cent cut in a normal cargo means the hauling of approximately 200 tons of cargo which has no value. It requires very little figuring to demonstarte that carrying this 200 tons of freight which nobody wants is an expensive bit of business.

There are various methods in general use by pipe line companies to determine the quantity of water and insoluble impurities in crude oil and all of them appear to have their limitations as well as their advantages.

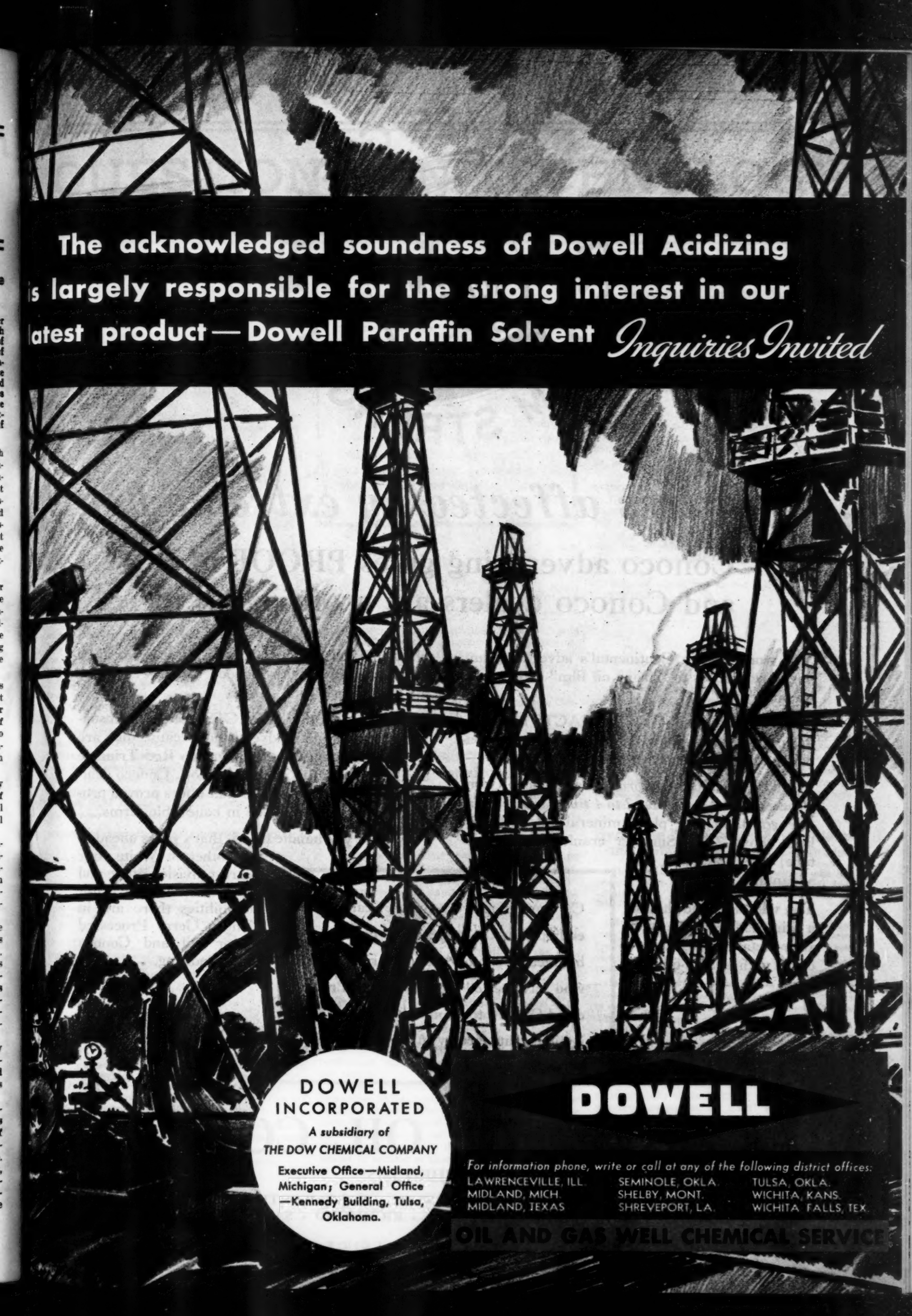
These include: (1) A.S.T.M. distillation method; (2) A.S.T.M. distillation method with modifications; (3) A.S.T.M. centrifuge method using benzol as solvent; (4) centrifuge method using carbon bisulphide and gasoline as solvent, and (5) centrifuge method using phenol or some other chemical demulsifying agent.

Determination of b.s. and water by centrifuge with the aid of a demulsifying agent is perhaps the simplest and most rapid and convenient method.

A method in wide use is that which provides for centrifuge action and the use of carbon bisulphide and gasoline as solvents. Opinions vary as to what constitutes the best solvent. Some companies use natural gasoline, others aviation gasoline and still others the general run of motor gasoline, which they say is effective.

The A.S.T.M. distillation method is generally recognized as the most nearly perfect but it determines water only and not water and sediment and further does not give an accurate reading in cases where the oil is contaminated with salt water.

In the distillation process, the fluid is eliminated but the salt and sediment remain. This method involves distilling a measured quantity of oil, mixed with a diluent, and collecting the distillate in a graduated receiver as the primary step. In the centrifuge method, using benzol as solvent, some companies use 50 cc. of solvent and a similar quantity of oil while others use 75 cc. of solvent and 25 cc. of oil with the result that there is wide variance in its application.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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Liquefied Petroleum Gases, Their Consumption and Uses

We wish to know how much liquefied petroleum gas is marketed in the United States. Is the business growing? What use is made of this material?—L. C.

The recently issued Mineral Market Report, M.M.S. 375, of the U. S. Bureau of Mines gives a complete review of the condition of the liquefied petroleum gas industry. The data given are from this report.

The following table illustrates the rapid expansion in the marketed production of liquefied petroleum gases during the period 1928-1934.

MARKETED PRODUCTION OF LIQUEFIED PETROLEUM GASES, 1928-1934

Year—	Total marketed production, thousands of gallons	Increase over previous year	
		Thousands of gallons	Per cent
1928	4,523	3,432	314.6
1929	9,931	5,408	119.6
1930	18,017	8,086	81.4
1931	28,770	10,753	59.7
1932	34,116	5,345	18.6
1933	38,931	4,816	14.1
1934	48,173	9,242	23.7

Propane, butane, pentane and propane-butane mixtures are the liquefied petroleum gases covered in this annual survey.

Propane is used largely for domestic purposes in households beyond the reach of gas company mains, but new uses are constantly being found for this gas by the manufacturing industries, particularly those requiring a close control of heat. Petroleum refiners use propane as a solvent in the manufacture of lubricating oils and as a refrigerant in dewaxing. Butane, which is used principally for industrial purposes, also serves as an enriching agent in gas manufacture. Recent experiments on the Pacific Coast indicate that propane-butane mixtures make a very satisfactory motor fuel for internal combustion engines. So far this use for automotive vehicles has been largely confined to heavy-duty trucks and busses, which run between fixed terminals, where supply points for these gases have been established.

MARKETED PRODUCTION OF LIQUEFIED PETROLEUM GASES BY USES AND METHODS OF TRANSPORTATION, 1934

(Thousands of gallons)

By uses:	Propane	Butane	Pentane and propane-butane mixtures
Domestic	15,236	1,046	1,399
Gas mfg.	326	5,064	900
Industrial and mscl.	3,119	19,443	1,640
Total 1934	18,681	25,553	3,939
Per cent 1934	38.8	53.0	8.2
By methods of transportation:			
Cylinders or drums	14,001	140	1,238
Tank cars, tank wagons, or by pipe line	4,680	25,413	2,701
Total	18,681	26,553	3,939

Elk Hills California Wax Free Oil For Making Lub Oils

My attention has been directed to an oil from California which is reported to be about 20 gravity, free from wax, and used for making lubricating oils. Can you tell me from what field this oil is from and what it contains?—F. M. O.

There is an oil of 20 A.P.I. gravity, practically free from wax, which is selected from certain wells in the Elk Hills Field of California. The general properties of this oil are shown in the table.

ELK HILLS WAX FREE OIL

Gravity, °A.P.I.	20
	Per cent
Naphtha	10
I.B.P.	200 °F.
E.P.	437 °F.
Gas oil	40
Grav.	34
I.B.P.	400° F.
E.P.	650 °F.
Lub. dist.	29
Grav.	18.5
Visc. Say. U. V. @ 100° F.	600
Pour	Zero
Residue	Asphalt or road oil

The lubricating oil distillate is treated with acid and neutralized with a caustic soda wash, then reduced in a vacuum still. The larger part of the distillate is finished as lubricating oils ranging from 400 to 600 viscosity but when desired an oil of 1,200 viscosity may be made.

Reference—C. O. Willson, Lubricants from California Crudes, The Oil and Gas Journal, December 4, 1930, page 34.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit problems to Dr. C. K. Francis. Questions should give as much detail as possible. Inquiries must be signed but only the given initials will be printed. The source of questions is considered confidential. Questions requiring discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered in these columns

Methods for Reducing the Wax Content of Petroleum Oils

We have a gas oil that has a very high wax content and would like to know the cheapest and simplest method for removing a part of this wax? The oil is sweet, 34-36 gravity, viscosity 43 Saybolt at 100°F.—R. C. S.

There are several methods in use for reducing the wax content of petroleum oils—cold settling, pressing at low temperatures, centrifuging and volatile hydrocarbon solution or solvent dewaxing. The cold settling process derives its name from the practice of storing lubricating stocks in tanks through the winter during the early days of petroleum refining in Pennsylvania. The low temperatures caused a partial solidification of the wax, which settled to the bottom of the tanks. The removal of this wax lowered the pourpoint of the upper layer of oil.

The pressing operation is expensive as it requires special apparatus, including refrigeration, chillers, presses and sweaters.

The centrifugal process requires that the oil be diluted with naphtha chilled and centrifuged. The naphtha-oil solution is distilled to separate the two liquids.

Solvent dewaxing requires the use of some hydrocarbon liquid. One of the methods makes use of liquid propane. The oil is dissolved in the propane and then reduced to a low temperature by permitting some of the solvent to evaporate. At this temperature part of the wax may be separated by settling or passing through a filter. This is the modern type of the cold settling process.

Probably solvent dewaxing may be the cheapest to meet your conditions. An important factor is the quantity of wax, which you have neglected to mention or its indication by the pourpoint.

Specifications for Aviation Gasoline Require 92 Octane Number

We are interested to learn what are the latest specifications required by the United States Army for aviation gasoline. What is the meaning of freedom from acids?—S. N. A.

The U. S. Army Specification for Aircraft Engine Fuel, grade 92, is issued under No. 2-95, June 19,1935, superseding No. Y-3,557-H.

A summary of the detail requirements is:

Antiknock value, min.—92 octane number.

Ethyl fluid permitted, max.—6 ml.

Color—Not lighter than when 3 ml. blue IT Ethyl Fluid is added to fuel, not darker than 21 Saybolt.

Corrosion—Copper dish negative color from evaporation of 100 ml.

Gum—The fuel shall be subjected to an accelerated aging test at 212° F. with oxygen at about 100 pounds for four hours. On evaporation of 100 ml. of a mixture of oxidized sample and gum solvent (equal parts acetone C.P. and benzene C.P.), the residue shall not exceed 10 mgm, less lead, if present.

Sulphur—Shall not exceed 0.10 per cent.

Distillation:

Per cent evaporated min.	Temperature °F.
10	167
50	212
90	275
10+50 min.	sum 307
Residue wax	2%

Reid vapor pressure, max.—7 lbs./100° F.

Freezing point, max.—minus 76° F.

Water tolerance, max.—2 ml. (+ or —).

Several of the now obsolete specifications for gasoline mentioned acid. For some years the requirement was that the residue from the distillation test should not show an acid reaction after the addition of water. This has been dropped for the reason that the copper dish test and sulphur requirements were thought to be adequate.

Hydrogen First Obtained from Steam and Methane by French Chemists

Do you have any reference showing who discovered that steam acting on methane at high temperature, at least above 900°F., caused hydrogen to be formed?—W. B. T.

It appears that the first to prepare hydrogen from steam and methane were the well known French chemists, Sabatier and Senderens. Their experiments reported in Compt. rend. 134, 514, 1902, are discussed by Marek-Hahn in Catalytic Oxidation of Organic Compounds in the Vapor Phase, page 271. Other workers have contributed to our present knowledge of the reaction. The material here is based on the last reference.

It has been shown that the reaction:

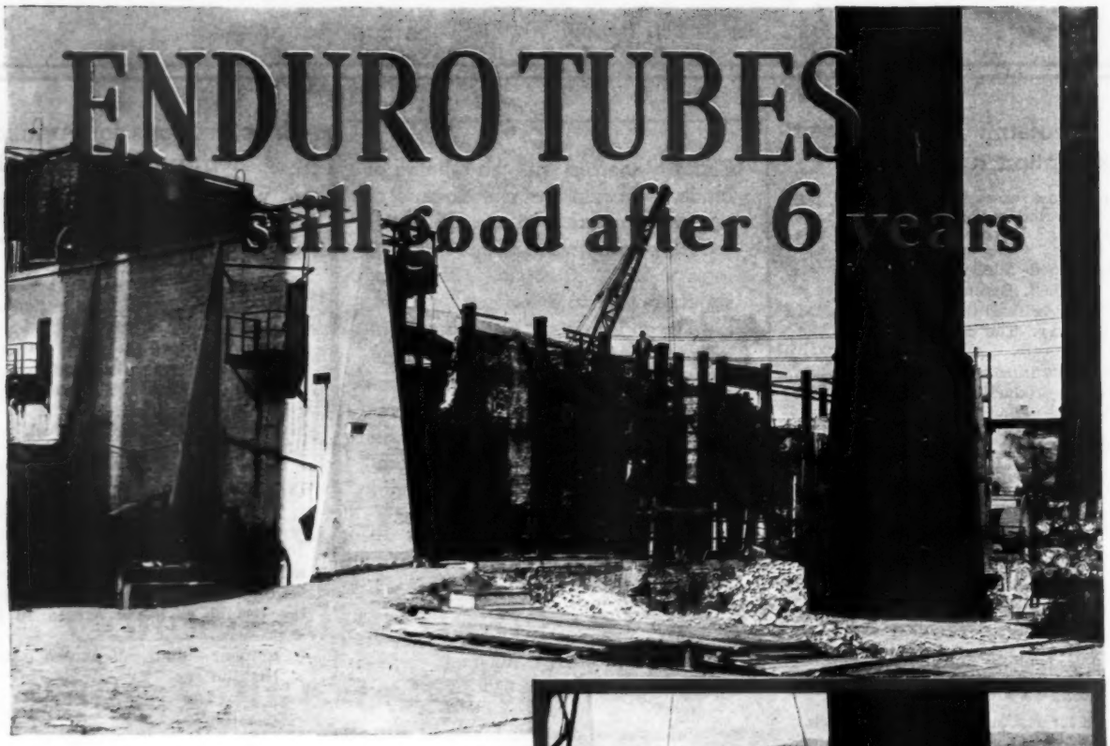
$$CH_4 + H_2O = CO + 3\,H_2$$

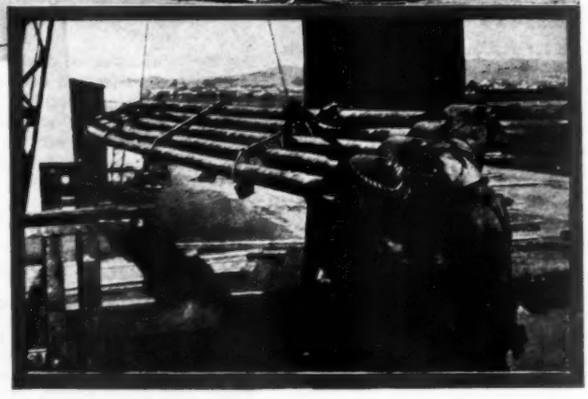
is a function of temperature. The reaction does not occur to any appreciable extent below 662° F. and a temperature above 1,832° F. is necessary for its practical completion. At 2,372° F. the decomposition goes quantitatively to form hydrogen and carbon monoxide. With excess steam it is possible to get good conversion at lower temperatures, as

$$CH_4 + 2\,H_2O = CO_2 + 4\,H_2$$

It is possible for these two reactions to be in equilibrium with each other through the water-gas catalytic reaction.

For further details, see Marek-Hahn.





This cracking still had to come down. Fire brick, cement and structural members had reached the limit of their endurance. Six years of high temperature operation had taken their toll. But the tubes of Republic ENDURO Stainless and Heat-Resisting Steel, purchased in 1929 and in continuous use since that time, were still good—so good, in fact, that they were used again in the rebuilt cracking unit. • This is typical of the service rendered by ENDURO Alloys—stainless steel alloys that resist corrosion and withstand high operating temperatures without scaling and without loss of strength. • Let us send you literature describing the many types of ENDURO now available.

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East and East Central Texas

CAYUGA FIELD TRINITY TEST IS DEEPEST IN THAT DISTRICT

By L. E. BREDBERG

DALLAS, Tex., Aug. 12.—The most interesting test in the East Texas district, Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 21-A Wills, in the heart of the Cayuga Field, northwest Anderson County, standing with bottom of hole at 8,867 feet after setting and cementing 7-inch casing at 8,750 feet, is now swabbing and washing preparatory to making a further test of the Trinity sand into which it has drilled. According to one of the co-owners it was washed for one and one-half hours on August 9 and swabbed on August 10 and 11 without results. It is considered by the operators to be showing a little salt water from the bottom of the hole.

The test was believed to have had good chances for making at least a heavy gasser from the Trinity sand and precautions were taken to prevent a blowout on account of gas encountered. A third mud pump was moved in and a special mud pit dug for mixing and thickening the mud. A special constructed, all welded manifold valve tested to 10,000 pounds closed in pressure was put in readiness to place on the test in case it showed for an oil or gas producer.

This is the deepest test drilled in the district and if it fails to make a producer from the Trinity sand it will undoubtedly be plugged back to the Woodbine sand, the regular producing horizon, and be produced from that sand. It is surrounded by Woodbine sand wells.

Tide Water Oil Co. and Texas Seaboard Oil Co. have made an outpost location approximately 2 miles south of the nearest producer in the Cayuga Field, on the H. W. C. Goode farm in the F. Smith Survey.

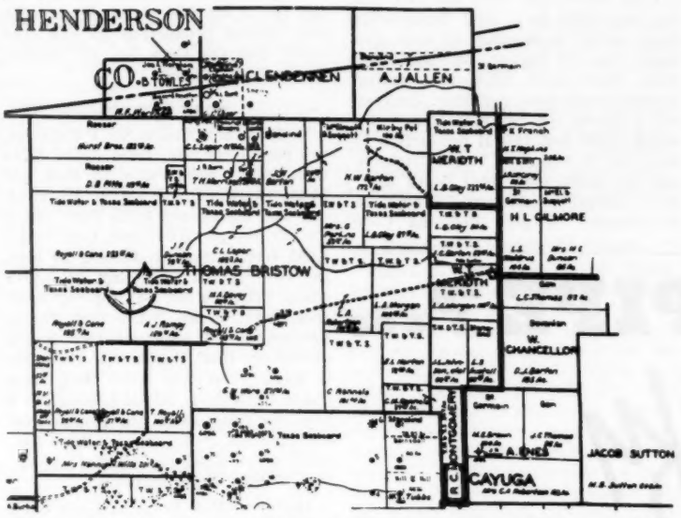
The same companies have made location for another test in the Long Lake area, southwest Anderson County. This location is on the H. B. Keeling farm in the S. Sanchez Survey, one-half mile east of Tucker. Derrick is up.

Henderson Producer

Henderson County received its first production during the week when Joe Worsham's No. 3 Wathen was completed for an initial production of 125 bbls. per day through one-eighth inch choke at total depth of 4,099 feet. This test is north of the Wathen extension area of the Cayuga Field, and extends production from Anderson County into Henderson County. Roeser and Pendleton have staked an offset location already, and it appears as if the field may be extended for a considerable distance into Henderson County.

Cayuga Field Proration

The Railroad Commission has issued orders in regard to producing and drilling the Cayuga Field in northwest Anderson County. Allowables in the field will be based 50 per cent on acreage and 50 per cent on potentials beginning September 1. A maximum of 20 acres is assigned to any one well. The field is now prorated on a straight per well basis which might later cause dense drilling such as has taken place in the East Texas Field.



Northern part of Cayuga Field, northwest Anderson County, which has extended into and given Henderson County its first production. Worsham's No. 3 Wathen has just been completed extending the field farther into Henderson County

Long Lake Extension

Tide Water Oil Co. and Texas Seaboard Oil Co.'s outpost test on the Shaw and Cern farm, 1 mile north of the nearest producer, which is a gasser, in the Long Lake Field, southwest Anderson County, has come through with an initial production of 70 bbls. per day, flowing through three-thirty-seconds inch choke. The oil tested 41.7 degrees. Total depth is 5,345 feet after plugging back from 5,377 feet.

This completion of an oiler on outpost lands leads to the belief oil production may be extended further north of the field which is principally a gas producing field. Completion of an oiler came as a surprise.

J. W. Luttes' No. 1 McKee, Anderson County wildcat in the W. F. Pool Survey, 3 miles southeast of Frankston, has been abandoned at a total depth of 4,516 feet. Elevation is 391 feet.

Camp Hill Area

Gulf Production Co.'s No. 2-A Southern Pine Lumber Co., in the J. C. Rosson Survey, Anderson County, is appearing as a Woodbine sand test. Bottom of the hole is 5,236 feet and 7-inch casing has been set at 5,221 feet. Plug will be drilled during next week and a test made. The company's No. 3-A Southern Pine Lumber Co., same survey, is showing for a sub-Clarksville producer at total depth of 5,095 feet where it is now testing. Both tests offset sub-Clarksville producers, but No. 2-A is below the sub-Clarksville production and has drilled into the Woodbine sand.

Morrow and others' No. 1 Mrs. J. J. Holton, in the B. Flores Survey, 5 miles east of Nacogdoches in Nacogdoches County, was junked and abandoned this week at a total depth of 915 feet.

Wildcat Locations

Location was made for a wildcat 1 mile northwest of Emory in Rains County by Allen and McClung and Collard's No. 1 S. P. Cain, in the J. Harges Survey. This is the third location made by these associates on a large block in the area. Derricks are up on two locations.

A test is to be drilled 2 miles southwest of Good Springs in Rusk County, on a block assembled in the M. Luther and adjacent surveys.

Kain Creek Oil Co., of Dallas, has assembled a block of around 4,000 acres 1 mile northwest of Scurry in the southwestern part of Kaufman County. A test will be drilled 1 mile northwest of the old Stanley and Darrey dry hole on the Pannell farm. The block falls in the Juan Trevino and adjacent surveys.

Tide Water Oil Co. has taken approximately 3,000 acres northeast of Murchison and from 4 to 5 miles west of Brownsboro in Henderson County. The block falls in the R. Acosta, A. Lindsey and adjacent surveys. Whether it was taken for Woodbine sand testing or for future Trinity sand testing is not known, but the company has been purchasing a large acreage in areas already proven dry to Woodbine sand production, and therefore taken for Trinity sand exploration.

W. W. Hinchcliffe and others are drilling on the Longbotham farm in the R. B. Longbotham Survey, another wildcat test in Freestone County.

EAST TEXAS FIELD

There were 62 locations staked in the East Texas Field this week, locations holding to about this number since the Texas Supreme Court issued its decision against exception wells. The Railroad Commission is still granting a few exception permits, but not in the quantity once issued.

Seventy-six tests were completed, eight of which were dry holes, eight pumpers and six swabbers. More dry holes, pumpers and swabbers are completed each week as operators continue to overstep the producing edge of the field or miss the sand lenses extending out on the flanks of the field. Three of the dry holes were in Gregg County and the other five were in Rusk. No dry holes were reported for Upshur County this week; during the previous week that county registered four dry holes.

C. & G. Oil Co. (Cranfil and Germany) and Alger Oil Co. (Securities Investment Co.) have completed a division of their jointly owned properties in the East Texas Field. The former company took over 17 wells and the latter received 20 wells including the Independent Pipe Line Gathering System in the field.

The legislative investigation committee has received more funds with which to continue its hot oil investigations and will convene at Kilgore on August 13. It will question witnesses about the current handling of administrative matters by the enforcement authorities and also testimony regarding hot oil runs.

EAST TEXAS COMPLETIONS

Gregg County

Arkansas Fuel Oil Co.'s No. 10-B McPherson, top pay 3,505 feet, total depth 3,530 feet, initial production 33 bbls. in 15 minutes; No. 6 Whatley, top pay 3,567 feet, total depth 3,589 feet, initial production 25 bbls. in 15 minutes. Atlantic Oil Producing Co.'s No. 32-A Burnside, top pay 3,509 feet, total depth 3,535 feet, initial production 126 bbls. per hour; No. 33-A Burnside, top pay 3,512, total depth 3,535 feet, initial production 128 bbls. per hour; No. 68 Judge, top pay 3,508 feet, total depth 3,534 feet, initial production 136 bbls. per hour; No. 64 Moore, top pay 3,491 feet, total depth 3,523 feet, initial production 136 bbls. per hour; No. 14 Prichard, top pay 3,509 feet, total depth 3,536 feet, ini-

tial production 132 bbls. per hour; No. 15 Prichard, top pay 3,491 feet, total depth 3,525 feet, initial production 131 bbls. per hour.

Cherokee Chief Oil Co.'s No. 4-B Johnson, top pay 3,639 feet, total depth 3,640 feet, initial production 80 bbls. per hour. Glasscock's No. 3 Racle, dry and abandoned 2,383 feet. Humble Oil & Refining Co.'s No. 23 Harris, top pay 3,485 feet, total depth 3,552 feet, initial production 50 bbls. per hour. Lewis and others' No. 1 Lee, top pay 3,569 feet, total depth 3,571 feet, initial production 15 bbls. in 15 minutes. Midfield Oil Co.'s No. 7 Rodden, top pay 3,616 feet, total depth 3,618 feet, initial production 24 bbls. per hour. Nathan Oil Co.'s No. 15 Walker, top pay 3,566 feet, total depth 3,567 feet, initial production 72 bbls. per hour through 1-inch choke. Selby Oil & Gas Co.'s No. 7-A Snavely, top pay 3,549 feet, total depth 3,595 feet, initial production 25 bbls. in 30 minutes.

Shell Petroleum Corp.'s No. 8 Basham, top pay 3,582 feet, total depth 3,602 feet, initial production 25 bbls. in 30 minutes; No. 20 Hampton, top pay 3,618 feet, total depth 3,687 feet, initial production 35 bbls. in 30 minutes. Stanolind Oil & Gas Co.'s No. 3 Adkins, top pay 3,692 feet, total depth 3,705 feet, initial production 11 bbls. in 15 minutes. Sun Oil Co.'s No. 2-B Fuller, dry and abandoned 3,685 feet. United East & West Oil Co.'s No. 4 Walker, top pay 3,618 feet, total depth 3,620 feet, initial production 38 bbls. per hour. Delta Drilling Co.'s No. 5 Butts, top pay 3,634 feet, total depth 3,635 feet, initial production 60 bbls. per hour.

Gulf Production Co.'s No. 11 Crim, top pay 3,625 feet, total depth 3,638 feet, initial production 62 bbls. per hour; No. 24 Culver, top pay 3,545 feet, total depth 3,555 feet, initial production 40 bbls. per hour. Jenkins' No. 2 Crane, top pay 3,535 feet, total depth 3,583 feet, initial production 15 bbls. in 15 minutes; No. 1 Dickson, top pay 3,535 feet, total depth 3,587 feet; initial production 15 bbls. in 20 minutes. Kilgore Refining Co.'s No. 2 King Brothers, top pay 3,550 feet, total depth 3,583 feet, initial production 40 bbls. per hour. Lewis Production Co. and Selby Oil & Gas Co.'s No. 11 Cole, top pay 3,532 feet, total depth 3,555 feet, initial production 38 bbls. in 30 minutes.

Potter Brothers' No. 6 Barton, top pay 3,536 feet, total depth 3,546 feet, initial production 20 bbls. in two hours, pumping. Shell Petroleum Corp.'s No. 25 Elder, top pay 3,539 feet, total depth 3,559 feet, initial production 100 bbls. per hour. No. 6 Lacy, top pay 3,606 feet, total depth 3,610 feet, initial production 45 bbls. per hour. Simmons' No. 1 Pyle, top pay 3,542 feet, total depth 3,570 feet, initial production 35 bbls. per hour. Sun Oil Co.'s No. 15 Morton, dry and abandoned.

Rusk County

Bellman & Sladek's No. 1 Williams, top pay 3,703 feet, total depth 3,740 feet, initial production 15 bbls. per hour. Constantine's No. 6 Mayfield, dry and abandoned 3,679 feet; No. 3 Tucker, top pay 3,647 feet, total depth 3,648 feet, initial production 20 bbls. in two hours, pumping. Cordova Union Oil Co.'s No. 7-D, top pay 3,625 feet, total depth 3,653 feet, initial production 20 bbls. in two hours, swabbing. Gulf Production Co.'s No. 7 Baton, top pay 3,575 feet, total depth 3,663 feet, initial production 8 bbls. per hour, swabbing. Houston Oil Co.'s No. 5-B Bean, top pay 3,585 feet, total depth 3,645 feet, initial production 35 bbls. in 30 minutes.

Humble Oil & Refining Co.'s No. 3 Roberson, top pay 3,592 feet, total depth 3,644 feet, initial production 4 bbls. per hour, pumping; No. 11-A Sexton, top pay 3,705 feet, total depth 3,745 feet, initial production 85 bbls. per hour. Bridewell Oil Co.'s No. 1 Elliott, dry and abandoned 3,648 feet. Bryant's No. 1 Redwine, top pay 3,510 feet, total depth 3,606 feet, initial production 20 bbls. per hour, swabbing. Chicago Oil Co.'s No. 3 Alford, top pay 3,648 feet, total depth 3,675 feet, initial production 20 bbls. per hour. Gant and others' No. 3 Goldberry, top pay 3,590 feet, total depth 3,617 feet, initial production 11 bbls. per hour; No. 5 Harris, top pay 3,606 feet, total depth 3,652 feet, initial production 11 bbls. per hour.

Big Rock Oil Co.'s No. 1 Henson, top 3,526 feet, total depth 3,548 feet, initial production 120 bbls. in 24 hours swabbing. Gulf Production Co.'s No. 10 Thrash, top pay 3,691 feet, total depth 3,706 feet, initial production 50 bbls. per hour through three-uarter inch choke. H.B.W. Oil Co.'s No. 8 Elliott, top pay 3,578 feet, total depth 3,604 feet, initial production 20 bbls. in two hours, pumping. Humble Oil & Refining Co.'s No. 20 Wheelis, top pay 3,741 feet, total depth 3,743 feet, initial production 80 bbls. per hour; No. 27 Wooley, top pay 3,643 feet, total depth 3,662 feet, initial production 80 bbls. per hour. Luling Oil & Gas Co.'s No. 2 Frederick, top pay 3,564 feet, total depth 3,666 feet, initial production 20 bbls. per hour, swabbing. Merrick's No. 7 Cooper, top pay 3,560 feet, total depth 3,635 feet, initial production 15 bbls. per hour, swabbing.

Miller Production Co.'s No. 11 Bradford, top pay 3,520 feet, total depth 3,612 feet, initial production 18 bbls. in 30 minutes. Shelburne's No. 3 Maxwell, top pay 3,522 feet, total depth 3,562 feet, initial production 20 bbls. per hour, pumping. Sinclair Prairie Oil Co.'s No. 62 Kinney, top pay 3,674 feet, total depth 3,682 feet, initial production 32 bbls. in 15 minutes; No. 62 Kinney, top pay 3,674 feet, total depth 3,682 feet, initial production 32 bbls. in 15 minutes; No. 67 Kinney, top pay 3,643 feet, total depth 3,653 feet, initial production 30 bbls. in 15 minutes. Sun Oil Co.'s No. 1 Dorsey, top pay 3,556 feet, total depth 3,646 feet, shot 30 quarts from 3,635-71 feet, dry and abandoned 3,646 feet; top Georgetown lime 3,628 feet; elevation 438 feet.

Sutton & Hawkins' No. 1 Kangerga, top pay 3,616 feet, total depth 3,624 feet, initial production 20 bbls. per hour. The Texas Co.'s No. 20 Kersh, junked hole 3,320 feet. Texas-Canadian Oil Co.'s No. 1 Gillstrap, top pay 3,560 feet, total depth 3,588 feet, initial production 20 bbls. in two hours, pumping. Tuberville's No. 2 Graham, dry and abandoned 3,668 feet. Ward Oil Co.'s No. 27 Thrash, top pay 3,784 feet, total depth 3,815 feet, initial production 80 bbls. per hour. Broughton & Wilkerson's No. 3-C Bradford, top pay 3,505 feet, total depth 3,570 feet, initial production 10 bbls. per hour, pumping.

Smith County

Johnson & Owens' No. 3 Wolford, top pay 3,734 feet, total depth 3,735 feet, initial production 60 bbls. per hour. Magnolia Petroleum Co.'s No. 8 Tyiska, top pay 3,763 feet, total depth 3,765 feet, initial production 80 bbls. per hour. Sun Oil Co.'s No. 17-B Pace, top pay 3,769 feet, total depth 3,770 feet, initial production 49 bbls. per hour. Wheelis Oil Corp.'s No. 6 Patterson, top pay 3,668 feet, total depth 3,670, initial production 32 bbls hour.

Upshur County

Coates' No. 3 Buie, top pay 3,606 feet, total depth 3,620 feet, initial production 25 bbls. in 15 minutes. Delta Drilling Co.'s No. 4 Saulter, top pay 3,768 feet, total depth 3,776 feet, initial production 20 bbls. in 30 minutes. Pewitt's No. 1 Jones, top pay 3,790 feet, total depth 3,809 feet, initial production 15 bbls. in 30 minutes. Johnston & Burnham's No. 1 Shelton, top pay 3,724 feet, total depth 3,728 feet, initial production 30 bbls. hour.

Lewis & Godlin's No. 4-C Mackey, initial production 20 bbls. in 15 minutes. Oils, Inc.'s No. 14 Sanders, top pay 3,579 feet, total depth 3,592 feet, intial production 25 bbls. in 30 minutes. Peckham Oil Co.'s No. 4 Webb, top pay 3,655 feet, total depth 3,680 feet, initial production 100 bbls. per hour. Sandford & Meadow's No. 3 Morgan, top pay 3,757 feet, total depth 3,788 feet, initial production 22 bbls. in 20 minutes. Sun Oil Co.'s No. 2-A Salter, top pay 3,737 feet, total depth 3,745 feet, initial production 20 bbls. per hour, pumping.

Anderson County

J. W. Luttes' No. 1 McKee, dry and abandoned 4,516 feet, elevation 391 feet. Roeser & Pendleton's No. 3 Ware and Wilson, total depth 3,065 feet, gas well, no gauge. Skelly Oil Co.'s No. 1 Williams, total depth 4,103 feet, initial production 5 bbls. per hour through one-eighth inch choke. Tide Water and Texas Seaboard Oil Co.'s No. 1 Shaw and Cern, total depth 5,345 feet, intial production 70 bbls. per day, 3/32-inch choke; gravity 41.7 at 70 degrees; elevation 300 feet.

Henderson County

Worsham's No. 3 Wathen, total depth 4,099 feet, initial production 125 bbls. per day through one-eighth inch choke.

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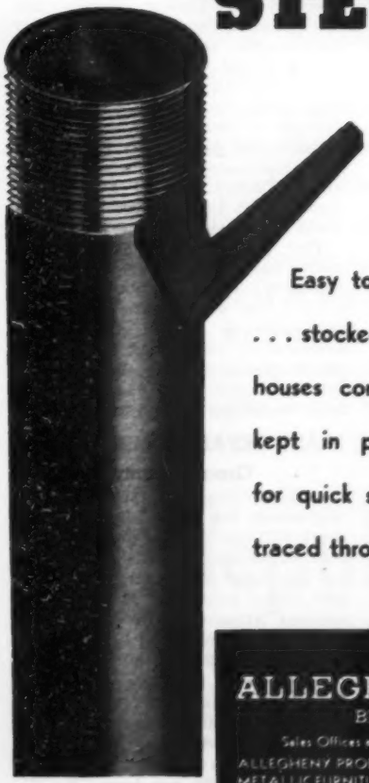

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West and North Texas

NEW INCREASE IN LOCATIONS, FOUR IN JONES COUNTY AREA

By
L. E. BREDBERG

FORT WORTH, Tex., Aug. 12.—West Texas stepped out again this week with another increase in number of locations. There were 33 reported, a number of which were wildcats and semiwildcats. Four were staked in the newly discovered area on the Jennings farm in northern Jones County; three by Farris and Fikes, who own the discovery well; and one by Ungren and Frazier, Jones County operators, who hold offset acreage.

One of the most interesting locations in the Permian Basin will be that of Sid Richardson on the B. F. Jenkins lands in the SE cor. of Section 13, Block 17, Winkler County, 2 miles north and a little west of his No. 1 Walton, co-discovery well in the Keystone-Walton area northeast of Kermit, Section 1, Block B-3.

Two semiwildcat locations were staked in Ward County by independent operators, and the Empire Gas & Fuel Co. made location in the O'Brien area in the northern part of the county on the Smith lands in Section 5, Block F.

Roy Westbrook and others made a location in the NE cor. of Section 5, Block B-5, 1 mile north of production in the Brown and Altman area and just south of the limits of Kermit in Winkler County. It is on the Howe-Halley trend, considered as having good possibilities of being linked by production, and in which case a field at least 14 miles long will be proven. The trend is about 3 miles east of and paralleling the Hendricks Field, but is producing from a different horizon.

Jones County Test

Deep Dome Drilling Co. of Houston has taken a block southeast of the new Lueders discovery in northern Jones County, and is to drill in Section 2, A. D. Norcop Survey. It will be 2 miles east and one-half mile south of Farris and Fikes' No. 1 Jennings, the discovery well completed this week for an initial production of 1,027 bbls. per day at total depth of 2,041 feet. Elevation is 1,582 feet.

Ector County

Gulf Production Co. has staked location for its third test on its Goldsmith 19,840-acre block in Ector County, to be carried as No. 3 Goldsmith, a west offset to Phillips Petroleum Co. and Pure Oil Co.'s No. 1 Cowden, completed this week for an initial production of 167 bbls. per day at total depth of 4,120 feet. The new well expanded the field at least 3 miles from northwest to the southeast. Phillips and Pure Oil Co.'s No. 1 Cowden, in Section 14, Block 44, Township 1s, T.&P. Survey, is still incomplete at total depth of 4,171 feet. It is making 160 bbls. per day with nearly 8,000,000 feet of gas. Tubing is being rerun preparatory to completing. It is 1½ miles southeast of the Goldsmith discovery of Gulf Production Co.

Sun Oil Co. and Atlantic Oil Producing Co.'s No. 1-B Holt, in Section 5, Block 43, Township 1n, T.&P. Survey, 2½ miles northeast of production in the Cowden area, Ector County, appearing as another extension well, is drilling at 4,200 feet in lime without an increase in oil. It made 35 bbls. of oil on August 11 while drilling, and is to be carried about 50 feet deeper unless an increase is struck. It may lead to proving of production between the Cowden Field in Ector and the Fuhrman area in Andrews County, to the north.

Runnels County Wildcat

John M. Castor has staked location for No. 1 Giesecke, in the north corner of Subdivision 3, Block 130, James Hughes Survey No. 277, Runnels County, and is moving in material. Golden Petroleum Co. of San Angelo has contracted to drill the test.

Tide Water Oil Co., which has just abandoned a test east of its discovery well in Fisher County, has staked a location on the Newman farm, about 4 miles east of Roby and about 10 miles south of the discovery.

Brewster County Mystery

Floyd C. Dodson's No. 1 Texas American Syndicate, in Section 66, Block 10, G.H.&S.A. Survey, Brewster County, has apparently drilled into an underground stream on its proposed Ordovician test. Water was drilled into at 1,686 feet, the test able to go only 10 feet when returns were lost. Between 4 and 5 tons of shredded paper has been put into the hole, all of it disappearing as fast as run. It is on what is known as the Hovey structure. A swift flowing underground river, which seems to have been struck, will no doubt preclude deeper drilling.

Outpost Abandonment

Texas Co.'s No. 1 Terry, in Section 62, Block 29, W.&N.W. Survey, southeast of the Iatan Field of eastern Howard County, but over the line in Mitchell County, has been abandoned at a total depth of 2,941 feet. Elevation is 2,347 feet. This test is an outpost test of the Iatan Field and limits the southeastern edge.

California Co.'s No. 3 Baker, Section 23, Block 33, Township 2s, T.&P. Survey, about one-half mile south of production in Glasscock County, has limited the south edge of that area by proving dry at a total depth of 2,490 feet. Elevation is 2,593 feet. It was given a 300-quart shot from 2,261-2,400 feet before abandoning.

Gaines Proposed Test

A tentative location has been staked in Section 414, Block G, C.C. S.D.&R.G.N.G. Railway Survey, northwest of Seminole on a well defined geophysical high that has caused considerable leasing in the past by major companies. Wahlenmaier of San Angelo, and associates have been working on a deal to drill on acreage assigned by the Humble Oil & Refining Co.

Dickens County Test

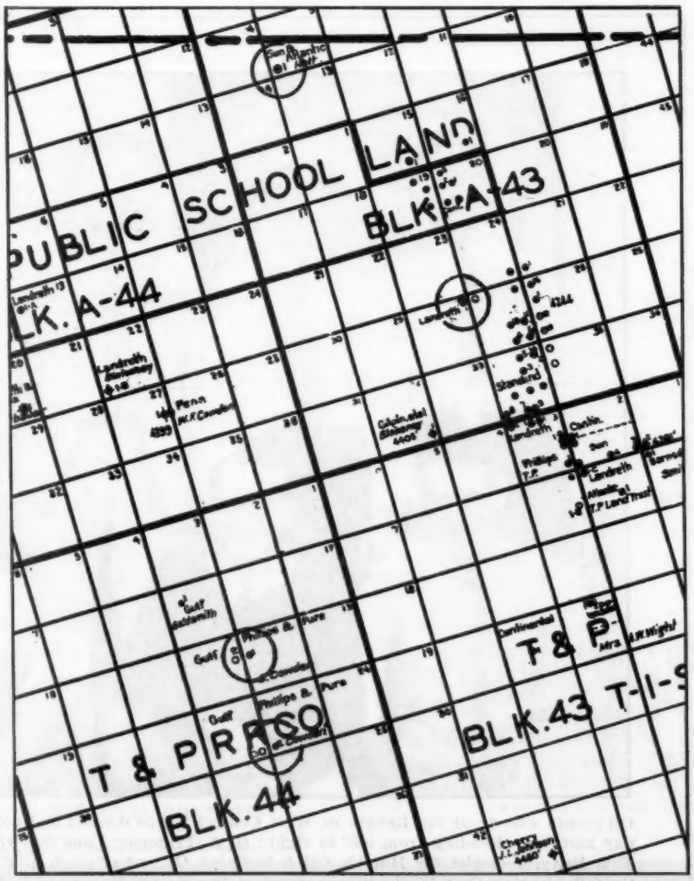
W. A. Myers, of Denver, and associates in Fort Worth, have assembled a 23,000-acre block on the McKenzie Peak anticline in Dickens County and intend drilling a 6,500-foot test in Section 8, Block C, Matador Lands Co. lands.

RANGER AND WICHITA FALLS

Humble Oil & Refining Co. has purchased 1,400 acres from the Nail estate, centering in Section 131, Block 10, E.T.R.R. Survey and is to drill an 1,800 foot test to the King sand. This location is north of production of Reliance Oil & Royalty Co. and others, and four dry holes have been drilled on the block.

Atlantic Pipe Line Co. continues to take oil from the Overall Pool in Coleman County regardless of threatening to withdraw from the area by July 15, but it has cut the price 15 cents per barrel, retroactive to August 1. Anzac Oil Corp., which a few months ago purchased Continental Oil Co.'s interest in the wells and block in the pool, has drilled an estimated 4,000,000-foot gas well in the J. H. Barclay Survey No. 701. The company has also been working over old wells to increase their production. Humble Oil & Refining Co. and Stanolind Oil & Gas Co. each have an interest in the new gas well just drilled, which is to be drilled deeper in quest for oil.

F. C. Lain, of Oklahoma City, is taking a 5,000-acre block centering in



Map showing recent extensions to the Goldsmith area and the Cowden area in Ector County. Sun and Atlantic Oil Producing Co.'s No. 1 Holt, near the Andrews County line, appears a 2½-mile extensioner to the Cowden Pool and Phillips and Pure Oil Co.'s No. 2 Cowden has widened the Goldsmith area to 3 miles along a trend, from the northwest to the southeast

Section 46, Block 12, H.&T.C. Survey, between the Red and Pease Rivers and is to drill a 3,500-foot test to start in 90 days. It may go to 6,000 feet.

Pipe line runs and production in the Wichita Falls district are being held around 60,000 bbls. per day since the recent cut in the allowable. This is 3,000 bbls. per day less than previously run. The daily allowable is only 56,000 bbls. whereas before the cut it was 58,500 bbls. per day. The wells are now prorated to 7 per cent of their potential, less the marginal well allowance. They were formerly produced at the rate of 20 per cent of their potential.

PANHANDLE DISTRICT

There were 13 locations staked in the Panhandle district and only seven wells completed. Skelly Oil Co. has extended the Borger Field in Hutchinson County by more than a mile northeast. Its No. 1 B. F. Jameson, Section 12, Block M-21, T.C.R.R. Survey, is bottomed at 2,868 feet making better than 400 bbls. per day on the swab after shooting with 520 quarts of nitro from 2,810-2,868 feet.

Alma Oil Co. is deepening No. 1 Mollie Lowe, wildcat southeast of Kirkland in the southeast corner of Childress County, which created excitement a few months ago when it encountered a good showing of oil from lime logged at 5,633-53 feet. It has apparently recovered from the hard luck it struck soon after the good showing, and it is drilling below 6,200 feet. If it fails to log an increase in production or find another producing horizon it will probably be plugged back and the upper saturated lime streak worked on in an effort to make some kind of a producer.

Instead of allowing for five-day potential tests on new wells completed in the Panhandle district, especially in Wheeler County where there has been much drilling during the year, and where many wells with high potentials have been completed, a new order issued by the Railroad Commission provides for only 24-hour potential tests on wells. The old method of making potential tests piled up oil in storage so that some of the purchasing companies asked for a reduction in their takings, and storage was being so completely filled there was danger of the price being cut, Texas Co. cutting its takings per well per day to 75 bbls.

WEST CENTRAL TEXAS COMPLETIONS

Andrews County

Humble Oil & Refining Co.'s No. 5 Means, total depth 3,210 feet, initial production 2,000,000 feet, gas.

Ector County

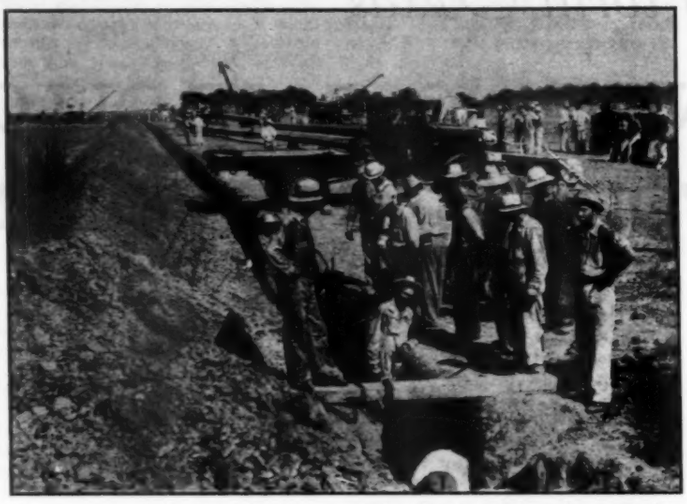
Texas Co.'s No. 12 Connell, top pay 3,496 feet, total depth 3,660 feet, shot 300 quarts from 3,484 to 3,650 feet, initial production 305 bbls. daily. Landreth Production Co.'s No. 1-A Blakeney, total depth 4,225 feet, shot 500 quarts from 4,120-4,225 feet, initial production 637 bbls. daily, elevation 3,066 feet. Phillips and Pure Oil Co.'s No. 2 Cowden, top pay 4,094 feet, total depth 4,120 feet, initial production 167 bbls., elevation 3,103.

Mitchell County

Texas Co.'s No. 1 Terry, dry and abandoned 2,941 feet, elevation 2,347.

Glasscock County

California Co.'s No. 3 Baker, dry and abandoned 2,490 feet, elevation 2,593 feet. Tribal Oil Co.'s No. 4-A Edwards, total depth 2,098 feet, initial production 45 bbls. per hour, pumping, elevation 2,560 feet.



Crews at work laying 20-inch Lone Star Gas trunk line from Anderson County to Irving Station just west of Dallas, Tex. Crews at this point were making tunnel for crossing under the railroad just west of Kerens, Navarro County, Texas

Howard County

Continental Oil Co.'s No. 15 Settles, dry and abandoned 3,252 feet, elevation 2,687 feet.

Jones County

Condor Petroleum Co.'s No. 3 Holt, total depth 1,907 feet, initial production 163 bbls., swabbing. Callahan and others' No. 1 Higgs, total depth 1,835 feet, initial production 25 bbls., pumping. Farris and Fikes' No. 1 J. W. Jennings, total depth 2,041, initial production 1,027 bbls., elevation 1,582.

Upton County

Gulf Production Co.'s No. 116 McElroy, total depth 2,920 feet, shot 300 quarts from 2,740-2,910 feet, initial production 608 bbls. Texas Pacific Coal & Oil Co.'s No. 7-D Sherk, total depth 2,245 feet, plugged back to 2,215 feet, shot 40 quarts from 2,177-2,206 feet, initial production 30 bbls. pumping. Stanolind Oil & Gas Co.'s No. 38 Burleson, total depth 2,057 feet, acidized, production 761 bbls. pumping.

Ward County

Messenger's No. 2 Allen, total depth 2,281 feet, shot 160 quarts from 2,165-2,278 feet, initial production 135 bbls. Eastland Oil Co.'s No. 1 Mason, total depth 2,551 feet, shot 350 quarts from 2,300 to 2,547 feet, initial production 341 bbls. Atlantic Oil Producing Co.'s No. 22 Johnson, total depth 2,523 feet, shot 200 quarts from 2,445-2,520 feet, initial production 1,588 bbls.

Winkler County

Harry Adams and others' No. 2-A Scarborough, total depth 3,043 feet, initial production 91 bbls. R. A. Westbrook's No. 1 Daugherty, total depth 2,968 feet, shot 240 quarts from 2,735-2,968, initial production 1,062 bbls.

PANHANDLE COMPLETIONS

Gray County

Continental Oil Co.'s No. 11-A Wright, top pay 2,895 feet, total depth 2,990 feet, initial production 322 bbls., pumping. Vulcan Oil Co.'s No. 1-A Kinard, top pay 2,315 feet, total depth 2,533 feet, shot with 860 quarts from 2,254-2,525 feet, initial production 279 bbls., pumping.

Hutchinson County

International Petroleum Co.'s No. 13 Lewis-Badger, top pay 2,923 feet, total depth 2,988 feet, initial produc-

Oil scouts who scout the Ranger or West Central Texas district and hold meetings at Cisco each Thursday morning. Reading from left to right: G. A. Plummer, Lone Star Gas Co.; C. D. George, Texas Co.; Tom Petty, geologist for Humble Oil & Refining Co., who "pinch hits" for Pete Booth; C. W. Hanley, Gulf Production Co.; W. A. Phelps, Sinclair Prairie Oil Co.; Paul L. Bartram, geologist and scout for Phillips Petroleum Co.; H. T. Carpenter, head of the Cisco check meeting and Ranger scouts. John Mouser, Sinclair Prairie Oil Co., and Ira B. McLaughlin, Shell Petroleum Corp., and Pete Booth, Humble Oil & Refining Co., were absent when picture was taken

BRIDGEPORT

USED AND REBUILT EQUIPMENT

We are continuously engaged in salvaging oil properties, in buying the surplus and un-needed equipment of major and independent operators, and in repairing and rebuilding oil field equipment. Our operations in this department cover an extensive territory. Stocks change daily, but we always have many cars of Used Tubular Products and thousands of items of Drilling, Production and Lease Equipment, both in stock and on salvage locations.

Here are a few representative items picked at random from Mid-Continent and Gulf Coast stocks:

UNITIZED DRAW WORKS

8-inch Bridgeport Unitized Johnson Draw Works at Fittstown, Okla.

This draw works is practically new—all bearings new. Foot clutch controlled. Lubricated from outside housing. Double Cathead. Rigid, compact unit built in our factory. Very attractive price on this unit. Can be shipped anywhere at reasonable cost.

DERRICK & PUMPING EQUIPMENT

84-ft., Emsco angle iron steel Derrick with tubular re-legs; Pumping Crown Block; Steel Bull Wheels; 40-h.p. Superior Gas Engine; Superior Countershaft Clutch; O. C. S. Universal Rig Front; Steel Walking Beam, Pitman, and Sampson Post; Belt Tightener; Steel Engine and Belt House, etc.

Equipment all in A-1 condition, and priced to sell on location near Galva, Kansas.

SLUSH PUMPS

Two 12x6-¾x16-inch, Type F, Johnson Gumbo Buster Mud Pumps.

These pumps have just been reconditioned in our Wichita shops. They are in excellent condition in every detail and will perform as satisfactorily as new equipment. Priced for delivery in any Mid-Continent or Gulf Coast locality.

TRAVELING BLOCKS

1—"K-500-A" 4-Sheave Lucey Roller Bearing Traveling Block complete at Pampa.

1—66-inch, 4-Sheave Union Tool Roller Bearing Traveling Block with guards, at Houston.

1—66-inch, 3-Sheave Johnson, Timken Bearing Open Type Traveling Block, at Fittstown, Okla.

These blocks have all been thoroughly overhauled and are in first class condition.

TRACTOR AND WINCH

10-20 McCormick-Deering equipped with Davis-Miller Winch.

Both tractor and winch have been completely overhauled and are in splendid condition. This equipment is suitable for lease work and for handling Tubing and Rods on wells of less than 2,000 feet in depth. Offered at very reasonable price, f.o.b. Wichita.

PUMPING ENGINES

40 h. p., 2-cycle, Type M, Weber Gas Engines complete with flywheels and Roller Baring Type Reversible Clutch with 16-inch face belt pulley.

One each of these engines at Russell and Wichita. Both have been completely rebuilt in our shops and are guaranteed in every respect.

ROTARY DRILLING ENGINE

12x12 Johnson Gumbo Buster Twin Cylinder Rotary Drilling Engine on Steel Skids.

This engine has been rebuilt throughout in our shops and is fully guaranteed. This is an especially good value—an engine that can go on any type of work and perform satisfactorily. Wichita stock.

STEAM DRILLING ENGINE

Here is a dandy—not many like this available. A fully enclosed Ajax, 12x12, single cylinder, complete with fly-wheels, balance rims, outboard bearing, 14x28-inch belt pulley, water heater, Ajax Carson Lubricator, etc. Completely overhauled and guaranteed to be in A-1 condition throughout. Wichita.

7-IN. O. D. SEAMLESS 2½-IN. SEAMLESS TUBING

7,303-ft. 7" O.D. (6⅝") 24-lb. 10thd excellent quality Seamless Casing, 28 and 29-foot joints. Like new.

3,836-ft. 2½-in., 10thd., Ext. Upset Seamless Tubing. 30-ft. lengths. Never been run in hole, but priced as used on location.

Above pipe all located in Seminole territory.

ALL ITEMS LISTED OFFERED SUBJECT TO PRIOR SALE.

Whether you want to buy New, Used, or Rebuilt Equipment—sell or trade your surplus equipment—it will pay you to contact us. We are interested in discussing special deals of all kinds. From no other source can so many types of products and services be obtained.

A telephone call to any of our stores or offices will bring you timely and worthwhile information when you want it.

Call "station-to-station" day or night, from anywhere

BRIDGEPORT MACHINE COMPANY
MANUFACTURERS DISTRIBUTORS
OIL DRILLING-FISHING AND PRODUCTION EQUIPMENT
GENERAL OFFICE AND WORKS: WICHITA, KANSAS

HOUSTON - DALLAS - KILGORE - PAMPA - TULSA - OKLA. CITY - McPHERSON - HUTCHINSON CHASE - RUSSELL - AND OTHER ACTIVE MID-CONTINENT AND GULF COAST POINTS

tion 436 bbls., pumping, shot with 240 quarts from 2,904-63 feet. Harry Stekoll Oil Producer's No. 8-G Whittenburg, top pay 2,910 feet, total depth 2,956 feet, initial production 420 bbls., pumping.

Wheeler County

Dyck Oil Co.'s No. 2 Sitter, top pay 2,466 feet, total depth 2,531 feet, initial production 298 bbls. Helena Oil & Gas Co.'s No. 12 Kelly, top pay 2,518 feet, total depth 2,545 feet, initial production 1,281 bbls. Smith Brothers' No. 1-B Harland, top pay 2,530 feet, total depth 3,583 feet, initial production 124 bbls.

COMPLETIONS IN WICHITA FALLS DISTRICT

Archer County

Abercrombie's No. 2 Abercrombie & Taylor, dry and abandoned 1,394 feet. Bonner Co. and King Royalty Co.'s No. 5-B Abercrombie, dry and abandoned 1,206 feet. Burns' No. 10-A Albers, total depth 1,258 feet, initial production 75 bbls. Cockburn's No. 9 Andrews, total depth 1,401 feet, initial production 25 bbls; No. 2 Carr, total depth 1,394 feet, initial production 70 bbls. Cullum's No. 35 Falls County School Lands' Ellis, total depth 1,140 feet, initial production 30 bbls. Perkins & Cullum's No. 189 Falls County, total depth 1,124 feet, initial production 100 bbls. Petroleum Producers' No. 14-E Richardson, total depth 1,244 feet, initial 150 bbls.

Reno Oil Co.'s No. 10 Wilmot, temporarily abandoned 2,863 feet. White & Duncan's No. 5-A Webb, dry and abandoned 707 feet. Deep Oil Development Co.'s No. 4 Wilson estate, total 2,219 feet, initial production 65 bbls. per hour. Fain-McGaha Oil Corp.'s No. 42 Arnold, total depth 1,188 feet, initial production 50 bbls. Florey Oil Co.'s No. 7 Brazina and others, total depth 1,445 feet, initial prdouction 12 bbls. Hedrick and others' No. 1 Allen, dry and abandoned 1,505 feet. Panhandle Refining Co.'s No. 8-F Prideaux, dry and abandoned 364 feet.

Wichita County

Bridwell Oil Co.'s No. 10 Allen & Kemp, total depth 1,022 feet, initial production 25 bbls. Coleman and others' No. 1 Denny, dry and abandoned 853 feet. Horwitz & Oldom's No. 4 Hooks, total depth 1,657 feet, initial production 344 bbls. Omohundro's No. 1 Hooks, total depth 1,210 feet, initial production 10 bbls.; No. 2 Hooks, total depth 1,222 feet, initial production 18 bbls.; No. 3 Hooks, total depth 1,220 feet, initial production 25 bbls.; No. 4 Hooks, dry and abandoned at 1,792 feet.

Wilbarger County

Davis Oil Corp.'s No. 2 Webb, dry and abandoned 2,550 feet. McAlester Fuel Co.'s No. 12-T Waggoner estate, total depth 1,874 feet, initial production 160 bbls.; No. 13-T Waggoner estate, total depth 1,891 feet, initial production 80 bbls. Solo Oil Co.'s No. 2 Waggoner estate, total depth 2,079 feet, initial production 25 bbls. oil and 50 bbls. water.

Throckmorton County

The Fall Production Co.'s No. 11 Graham, total depth 1,836 feet, initial production 8 bbls. day.

Young County

Burns' No. 2 Hamilton, dry and abandoned 963 feet. Cato Brothers' No. 6 Hamilton, total depth 926 feet, initial production 60 bbls.; No. 2-B Hamilton, total depth 935 feet, initial production 12 bbls. F.H.E. Oil Co.'s No. 3-B Jeffery estate, total depth 660 feet, initial production 35 bbls. Griffin and others' No. 1 Griffin, dry and abandoned 1,081 feet. Hawkins and others' No. 9 Kirkland, total depth 684 feet, initial production 100 bbls. Hines and others' No. 1 Gray, dry and abandoned 1,251 feet.

Kleiner's No. 4 Kirkland, total depth 682 feet, initial production 60 bbls. Riggs' No. 21 Larrimore and others, dry and abandoned 723 feet. Sams and Myers' No. 1 Jeffery estate, dry and abandoned 876 feet. Simmons and others' No. 4 Daily, dry and abandoned 600 feet. Solo Oil Co.'s No. 4 Deitrich, total depth 1,096 feet, initial production 40 bbls. Nash & Windfohr's No. 1 Atwell, total depth 2,740 feet, initial production 312 bbls.

Union Gas Operations

CHATHAM, Ontario, Aug. 10.—The Union Gas Co. of Canada, Ltd., and its subsidiaries, Windsor Gas Co. of Windsor and City Gas Co. of London, report profits of $112,966 for the first three months of the fiscal year, commencing in April; comparing with $61,299 for the same period last year. The increase is due to a substantial increase in gas sales. The company will deliver natural gas to London this fall, replacing manufactured gas previously sold there.

W. A. Harrison, of the Pure Oil Co. staff, Mount Pleasant, has returned from visiting friends in Logan, Ohio. Harry Gaspeny has returned from a motor tour through the East to New York, Boston, Washington and Niagara Falls.

Bureau of Mines

Crude Petroleum: The production of crude petroleum in June 1935, was 82,338,000 bbls., a daily average of 2,744,600 bbls. This average represents an increase of 84,800 bbls. over May, 1935, and 76,600 bbls. over June, a year ago. The gain in output in June resulted primarily from seasonal influences. It is noteworthy that the excess of actual production over the total recommended by the Bureau of Mines for June was less than the excess over the allowable of the Federal Agency for May.

California showed the largest gain in output of any of the states, its average increasing from 494,900 bbls. in May to 557,000 bbls. in June. The gain in California in June was apparently general throughout all the important fields. Daily average production in Texas rose to 1,089,800 bbls., the highest in several months. Most of the gain in Texas was recorded in East Texas, where the daily output was 504,800 bbls. in June. Although the total initial in East Texas in June was less than in May, there were more wells drilling in the field on June 30 than on May 31. Production in Oklahoma showed a small decline, in Kansas a small increase, in Louisiana, it continued to rise to record levels.

Crude runs to stills averaged 2,724,000 bbls. in June, a material increase over May. Exports of crude amounted to 5,589,000 bbls., a substantial increase over May. To satisfy the increased demand, material withdrawals were made from stocks, the total of which declined from 338,559,000 bbls. on May 31 to 334,757,000 bbls. on June 30. Crude stocks are now lower than at any time since pre-Seminole days in early 1927.

Refined Products: Increased crude runs offset a small decline in gasoline yield with the result that the production of motor fuel again increased. The domestic demand for motor fuel in June was 37,884,000 bbls., a daily average of 1,263,000 bbls. Compared with May, this average was disappointingly low; however, it represents an increase of about 4 per cent over June, 1934. Exports of motor fuel recorded a surprisingly large increase, the daily average for June being 107,000 bbls. compared with 69,000 bbls. in May. On June 30 total stocks of finished and unfinished gasoline amounted to 59,507,000 bbls., a decline of 1,976,000 bbls. for the month. This compares with a decrease of 2,000,000 bbls. as recommended by the Bureau of Mines for June.

According to the Bureau of Labor Statistics, the price index for petroleum products for June, 1935, was 53.2, compared with 52.2 for May, 1935, and 50.6 for June, 1934.

The refinery data of this report were compiled from refineries having an aggregate daily recorded crude oil capacity of 3,698,000 bbls. These refineries operated during June, 1935, at 74 per cent of their capacity, compared with an operating ratio of 70 per cent in May.

Employes Acquire Stock

TORONTO, Ontario, Aug. 10.—The Fourth Co-operative Investment Trust of Imperial Oil, Ltd., which went into effect July 1, 1932, has been wound up and the stock turned over to employes. Imperial employes throughout Canada took advantage of the co-operative arrangement to secure stock in the company.

Oil scouts in East Texas district who check at Tyler each Thursday: Reading from left to right, seated—Lee Stedman, Pure Oil Co.; C. H. Conway, Amerada Petroleum Corp.; S. L. Germany, Shell Petroleum Corp.; Francis Donahue, Texas Co.; J. S. Fox, Arkansas Fuel Oil Co.; Bill Davis, Sun Oil Co.; G. J. (Doc) Sevier, Pure Oil Co. Back row—Mr. Fezzell, Phillips Petroleum Co.; Claude Strahan, Atlantic Oil & Refining Co.; Bert Lloyd, Sinclair Oil & Gas Co.; G. C. Hanna, Humble Oil & Refining Co.; C. L. (Dixie) Harris, Stanolind Oil & Gas Co.; Paul Schultz, Empire Gas & Fuel Co.; M. Jackson, Magnolia Petroleum Co.; C. J. Bradley, Texas Co.; Pete Barenkamp, Sun Oil Co.; C. H. (Red) Fidler, Tide Water Oil Co.

Rocky Mountain Area

LANCE CREEK COMPLETION IN SUNDANCE SAND, 2,000 BBLS.

By T. R. INGRAM

DENVER, Colo., Aug. 12.—The Continental Oil Co. completed a Sundance sand well in the Lance Creek Field of eastern Wyoming, good for 2,000 bbls. of oil a day. The new well is on the southwest side of the field. The Ohio Oil Co. had a failure in the Sundance sand in its test of the Two Rivers structure in Albany County, Wyoming.

NEW MEXICO

Cooper Area

Humble Oil & Refining Co.'s No. 1 Mosley, 660 feet from S and E lines of SE quarter Section 10-24-36, in the Cooper area, was completed. Five and one-half inch pipe was set at 3,547 feet, oil pay was had at 3,565-85 feet. The well produced 600 bbls. naturally in 24 hours, with 225,000 feet of gas.

Another completion in the same field was Tidewater Oil Co.'s No. 1 Woolworth, 1,980 feet from E and 660 feet from S lines of Section 26-24-36. Seven-inch casing was set at 3,465 feet, oil at 3,418-39 feet, total depth 3,494 feet but plugged back to 3,439 feet and casing perforated at 3,418-22 feet. The well was acidized, and later produced 312 bbls. of oil and 648 bbls. of water. It also made about 2,000,000 feet of gas initially.

Atlantic Oil Producing Co. and Kirby Petroleum Co.'s No. 1 Woolworth, C SW NE of Section 26-24-36, was completed, and rated as good for 3,700 bbls. of oil a day from lime pay at 2,462-3,481 feet. It produced 156 bbls. of oil an hour through 2½-inch tubing set at 3,470 feet. Gas volume 3,000,000 feet, elevation 3,329 feet.

Continental Oil Co. and The California Co.'s No. 3 Vaughn, A-14, C SW SW of Section 14-24s-36e, a near completion in lime at 3,510 feet, has set 2½-inch tubing with packer at 3,495 feet and is preparing to test. On a drill-stem test at 3,493-3,510 feet, the well produced at the rate of 50 bbls. of oil an hour with a small amount of gas.

Gypsy Oil Co.'s No. 1 Cooper, C SW SW of Section 11-24s-36e is a near completion in lime at 3,525 feet. At 3,493-3,510 feet, the well tested 50 bbls. of oil hourly.

Continental Oil Co.'s No. 14-A-5 Vaughn, C NW NW Sec. 14-24-36.
3,200,000 ft. gas and a showing of oil 3,471-3,500 ft., drilling 3,500 ft.

Continental Oil Co.'s No. 14-A-6 Vaughn, C NE SW Sec. 14-24s-36e.
Building rig.

Continental Oil Co.'s No. 14-A-4 Vaughn (formerly No. 14-4-A), C NW SW Sec. 14-24-36.
Drlg. 2,895 ft.

Continental Oil Co.'s No. 14-A-3 Vaughn, C SW NW Sec. 14-24-36.
T.D. 3,510 ft., in lime; drill stem test 3,493-3,510 ft.; est. 50 bbls. per hour, to test.

Continental Oil Co.'s No. 15-A-2 Vaughn, C SW SE Sec. 15-24-36.
Location.

Continental Oil Co.'s No. 23-A-2 Gates, C NW NW Sec. 23-24-36.
Rig.

Continental Oil Co.'s No. 27-A-1 Gates, C SE SE Sec. 27-24s-36e.
Location.

Gypsy Oil Co.'s No. 1 Cooper, C SW SW Sec. 11-24s-36e.
Set 5½-in. csg., drill stem test 3,500-25 ft., showed 50 bbls. fluid per hour, 8,000 ft. gas.

Gypsy Oil Co.'s No. 2 Cooper, C NW SE Sec. 23-4s-36e.
Set 9⅝-in. csg. 1,349 ft.

Humble O. & R. Co.'s No. 1 Cooper, C SE NW Sec. 14-24s-36e.
T.D. 3,512 ft., fishing for drill pipe.

Humble O. & R. Co.'s No. 2 Moseley, C NW SE Sec. 10-24s-36e.
Set 13⅜-in. csg. 310 ft.

Humble O. & R. Co.'s No. 3 Coats, C NW NW Sec. 10-24s-36e.
Flowed 85 bbls. per hr. in drill stem test, 3,544-80 ft. cemented 5½-in. csg.

Humble O. & R. Co.'s No. 4 Coats, C NE NE Sec. 10-24-36.
Building rig.

California Co.'s No. 1 State, lease 2, C SW SE Sec. 20-21-36e.
Drill stem test 3,850-3,900 ft., 390 ft. fluid, drlg. 3,905 ft.

California Co.'s No. 2 Meredith, C SE SE Sec. 19-21s-36e.
Drlg. 3,100 ft.

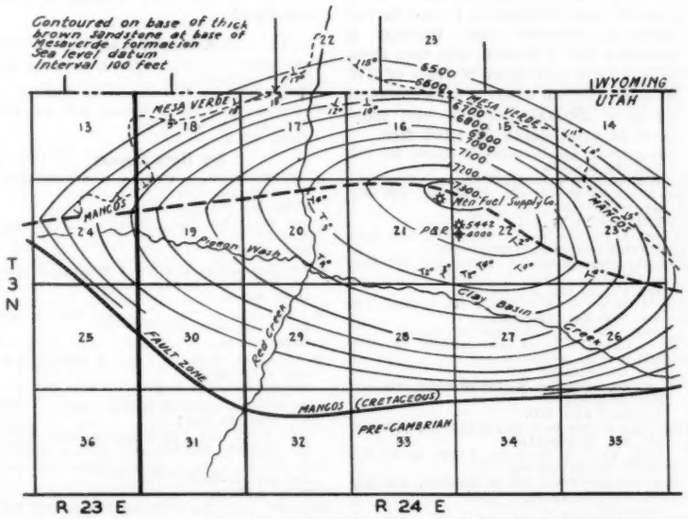
Continental Oil Co.'s No. 8-A-4 Meyers, C NW SW Sec. 8-21s-36e.
Drlg. 960 ft.

Continental Oil Co.'s No. 17-B-1 Meyers, C NE SE Sec. 17-21s-36e.
Spudding.

Continental Oil Co.'s No. 8-B-3 Meyers, C SW NW Sec. 8-21s-36e.
Drlg. 1,892 ft.

Continental Oil Co.'s No. 18-A-3 Meyers, C NE SE Sec. 18-21s-36e.
Material on location.

Continental Oil Co.'s No. 18-A-3 Lockhart, C NE SW Sec. 18-21s-36e.
Location.



—Courtesy Petroleum Information, Inc., Denver.

New Clay Basin gas field being developed by Mountain Fuel Supply Company in Utah field

Phillips Pet. Co.'s No. 16 Woolworth, C NE SE Sec. 27-24s-36e.
Running 10¾-in. csg. 1,392 ft.

Skelly Oil Co.'s No. 1 Coats, C SW SE Sec. 3-24-36.
Drlg. 3,460 ft.

Tide Water Oil Co.'s No. 1 Coats, C SW NE Sec. 10-24s-36e.
Drlg. 1,620 ft.

Eunice Area

One completion was recorded in the Eunice Field in the past week in review, Humble Oil & Refining Co.'s No. 4-B State, 660 feet from N and 1,980 feet from E lines of NE quarter Section 29-21-36. Casing, 5⅞-inch was set at 3,834 feet, oil at 3,838-3,925 feet. It was acidized with 2,000 gallons at 3,900 feet. It made 350 bbls. of oil the first 24 hours.

Empire Gas & Fuel has cellar dug for No. 1 State D, 660 feet from N and 1,980 feet from E lines of NE quarter Section 32-21-36.

Atlantic Oil Prod. Co.'s No. 2-C State, C SE SE Sec. 5-21-36.
Total depth 3,810 ft.; drill stem test showed 360 ft. oil and 180 ft. drilling fluid; set 7-in. csg.

Atlantic Oil Producing Co.'s No. 1-D State, C NW SE Sec. 20-21s-36e.
Drlg. 640 ft.

Atlantic Oil Prod. Co.'s No. 2-G State, C SW SW Sec. 5-21s-36e.
Set 8⅝-in. csg. 1,381 ft.

Continental Oil Co.'s No. 9-B-4 Meyers, C NE NW Sec. 9-21-36.
T.D. 3,884 ft.; tested 150 bbls. per day with 10,000,000 ft. gas open; will rerun tubg. with packer; bldg. pumping derrick.

Gypsy Oil Co.'s No. 1 Orcutt, C SE NW Sec. 5-21-36.
Drlg. 2,645 ft.
Gypsy Oil Co.'s No. 2 Houston, C NE SE Sec. 7-21s-36e.
Drlg. 3,580 ft.

Humble O. & R. Co.'s No. 5-B State, C SW NE Sec. 29-21s-36e.
Rigging up.

Humble O. & R. Co.'s No. 4-B State, C NW NE Sec. 29-21-36.
Pay 3,838-3,925 ft., acidized, 350 bbls. oil in 24 hrs., completed.

Jim Murray's No. 1 Wallace, SW SW SW Sec. 3-21s-36e.
Drlg. 795 ft.

R. Olsen et al's No. 1 State, C NW SE Sec. 5-21s-36e.
Drlg. 3,180 ft.

Ohio Oil Co.'s No. 1 State-Maxwell, C NE NW Sec. 16-22-36.
Show of gas 3,079-89 ft. ad 3,332-38 ft., drlg. 3,528 ft.

Repollo Oil Co.'s No. 3 Adkins, SW SW SE Sec. 9-21-36.
Set 7-in. csg. 3,850 ft.

Shell Pet. Corp. and Devonian Oil Co.'s No. 2 State, C NW NE Sec. 20-21s-36e.
Drlg. 3,590 ft.

Texas Pacific Coal & Oil Co.'s No. 1-A State, Acct. 2, C SE SW Sec. 9-22-36.
Show of oil and gas 3,304-24 ft., drlg. 3,480 ft.

Twin State Oil Co.'s No. 1 Record, C NW NW Sec. 22-22s-36e.
Drlg. 2,285 ft.

Jal Area

Field work in the Jal Pool showed no results in the past week and only drilling progress can be reported.

Harry Leonard's No. 1-B Justis, SW NW NW Sec. 26-25-37.
T.D. 2,662 ft.; R.U.R.

Gypsy Oil Co.'s No. 1-B Arnott, NW SW SW Sec. 32-25-37.
T.D. 3,400 ft.; P.B. to 3,240 ft.; ran 2½-in. to 3,065 ft.; testing.

Gypsy Oil Co.'s No. 1-A Vinson Ramsey, C SE SE Sec. 12-26-36.
T.D. 3,228 ft.; P.B. to 3,100 ft., drilled out to 3,180 ft., testing

R. H. Henderson et al's No. 1 Ogg, C NW NE Sec. 11-25-36.
Spudded and S.D.

Jeffers Oil Co.'s No. 1 Carlson, C NW SE Sec. 27-25-37.
Drlg. 2,665 ft.

Phillips Pet. Co.'s No. 1 Woolworth, Blk. 2, C SW SW Sec. 6-25s-37e.
Drlg. 1,325 ft.

Tide Water Oil Co.'s No. 1 Coats, SE SE NW Sec. 31-25-37.
T.D. 3,332 ft.; W.O. pumping equipment; flowed 120 bbls. per day, 15 per cent water, 750,000 ft. gas, stopped flowing.

Hobbs Field

No completions were reported in the Hobbs Pool in the past week the following report shows progress of wells drilling:

Amerada Pet. Corp. and Skelly Oil Co.'s No. 2-E State, NE NW NW Sec. 24-18s-37e.
Drlg. 3,635 ft.

Continental Oil Co.'s No. 4 Grimes, SW NE SE Sec. 28-18-38.
T.D. 3,858 ft.; fshg. for drill pipe.

Samedan Oil Co.'s No. 2-B Moom, 1,315 ft. from N line and 1,120 ft. from E line, Sec. 28-18s-38e.
Cellar and pit.

Samedan Oil Co.'s No. 2 Byers, CWL SW NW Sec. 3-19s-38e.
197 ft. and R.U.R.

Samedan Oil Co.'s No. 1-B State, CEL SE NW Sec. 25-18s-37e.
Set 7-in. csg. 4,042 ft.

Samedan Oil Co.'s No. 4-C State, 1,315 ft. from S and W lines, Sec. 24-18s-37e.
T.D. 268 ft.; S.D.

Gypsy Oil Co.'s No. 4 Graham-State, C NW NE Sec. 24-18-37.
T.D. 4,230 ft., testing.

National Securities Oil Co.'s No. 1 Linam, NE SE SW Sec. 33-18-37.
T.D. 4,506 ft.; P.B. to 4,238 ft.; 1,000 ft. oil, 300 ft. water in hole, shut down for orders.

Shell Pet. Corp.'s No. 4 Nora Berry, 1,325 ft. W of E line and 1,315 ft. N of S line, Sec. 31-18-38.
Swabbed 7,200 bbls. of fluid in three days, after acidizing 95 per cent water, set packer with perforations below, produced 130 bbls. of oil per hour, no water, testing.

Shell Pet. Corp.'s No. 2 Turner, 1,020 ft. from N line and 2,316 ft. from E line, Sec. 24-18-38e.
Drlg. 3,520 ft.

Shell Pet. Corp.'s No. 2 Rice, C SW SE Sec. 13-18s-37.
T.D. 3,960 ft.; set 7-in. csg.

Stanolind O. & G. Co.'s No. 11 Capps, C NE SW Sec. 3-19s-38e.
Set 7-in. csg. at 4,090 ft.

Monument Area

Amerada Pet. Corp.'s No. 1 Andrews, W NW NW Sec. 12-20s-36.
T.D. 3,232 ft.; S.D. for repairs.

Jeffers Oil Co.'s No. 1 Britt, C SE NW Sec. 7-20s-37.
T.D. 1,000 ft., S.D. for repairs.

Lea Area

Culberson & Irwin's No. 1 Sue Richards, C SW SE Sec. 10-21s-32e.
Drlg. 650 ft.

Culberson & Irwin's No. 1 Eva Brown, C NE NE Sec. 23-21s-32e.
Drlg. 1,120 ft.

East of Monument Pool

The Texas Co.'s No. 1 J. Saunders permit, 660 feet from S and 1,980 feet, from W lines of SE quarter Section 18-19-37, north of the Eunice

Field and southwest of the Hobbs Pool and 3 miles east of the Monument Pool, set 7-in. pipe at 3,763 feet, had oil at 3,898-3,973 feet, and was given an acid treatment. It made 700 bbls. of oil and 500,000 feet of gas following the treatment and was completed.

The Amerada Petroleum Corp. had cellar dug for No. 1 State G, C SW SW Section 18-19-37. Gypsy Oil Co. made a location for No. 1 B. V. Culp, 660 feet from N and 1,980 feet from W lines of NW quarter Section 19-19-37, and Phillips Petroleum Co. made location for No. 1 B. V. Culp, 660 feet from N and W lines of NW quarter Section 19-19-37.

Eddy County

R. D. Compton's No. 6 State, 1,520 feet from S and W lines of Section 15-16-23, Eddy County, was dry and abandoned at 952 feet.

Fred Brainard's No. 1 State, 660 feet from N and 3,040 feet from E lines of Section 2-17-28 was dry and abandoned at 2,172 feet.

Flynn, Welch & Yates' No. 1 Harvey Yates, 1,980 feet from N and 660 feet from E lines of NE quarter Section 6-20-27, was dry and abandoned at 2,026 feet.

R. D. Compton et al's No. 6 Mann, NW SW NE Sec. 4-18-27.
Drlg. 1,057 ft.
Coronado Exploration Co.'s No. 1 Anderson, C NE NW Sec. 12-20s-23.
S.D. 1,462 ft.
Dooley & Shank's No. 1 McClay, C NE SE Sec. 33-18-30.
Drlg. in hard lime at 3,058 ft.
Dooley et al's No. 1 Commerce Trust, NW NE SW Sec. 8-20-27.
T.D. 700 ft.; fishing 2 joints of 6¼-in.
Emperor Oil Co.'s No. 2 Puckett, C NW NE Sec. 24-17-31.
Fishing. T.D. 700 ft.
Getty Oil Co.'s No. 7 Dooley, SW SW NW Sec. 24-20-29.
T.D. 6,052 ft.; bailing to resume.
R. G. Patillo's No. 1 Thomason, SE SE NE Sec. 12-20-28.
S.D. 1,058 ft.
Pecos Valley Gas Co.'s No. 1 Hastie, SE NW NE Sec. 17-17-28.
Abandoned at 1,884 ft.
Rampo Oil Co.'s No. 1 State, CNL NE SE Sec. 32-17-28.
Drlg. in lime at 2,220 feet.
Red Lake Oil Co.'s No. 5 State, NW NW NE Sec. 27-17s-28e.
Spudding.
Repollo Oil Co. and C. J. Dexter's No. 3-X Parke, SE SE SE Sec. 15-17-30e.
Drlg. at 2,700 feet.
Tignor, Etz & Keyes' No. 2 Keyes, C NE SW Sec. 10-17-28.
Drlg. in lime at 1,625 ft.
Van P. Welch's No. 1 State, 220 ft. out of NW cor. Sec. 22-17s-28e.
Drlg. 235 ft.

DeBaca County

Ralph Burlingame et al's No. 1 Woods, NE SW SW Sec. 6-4n-20e.
T.D. 4,622 ft.; moving in cable tools to complete.

Guadalupe County

Anton Chico Dev. Co.'s No. 2 fee, NW NE SW Sec. 20-9n-17.
S.D. 900 ft.; changing over to cable tools.

McKinley County

Bennett & Lingfelter's No. 1 Lark Drlg. Co., NE NE NW Sec. 29-20-9w.
S.D. 569 ft. in sand; est. 2 bbls. daily at 469-72 ft. and 554-60 ft., abandoned.
A. C. Kittel's No. 1, NW NW Sec. 32-20-9w.
Material on ground.
R. W. Sanderson et al's No. 1, NE SW Sec. 21-20-9w.
Material on ground.
David K. Stacey's No. 2 Webber, SW NW Sec. 29-20-9w.
Rig on ground.

Quay County

Quay County Dev. Co.'s No. 1, C SE SW Sec. 19-9n-33e.
Drlg. 600 ft.; show of gas.

McKinley County

Claudel Development Co.'s No. 1 T. A. Wilmes and others, 1,980 feet from E and 600 feet from S lines of Section 21-2s-30, McKinley County, was abandoned as dry. It had been drilled to 3,655 feet and plugged back to 3,385 feet and shot at 3,345-67 feet with no results.

Ceprock Area

Vierson & Brown's No. 1 Robinson, C NW SE Sec. 14s-11e-32.
Rigged up rotary.

Maljamar Area

Maljamar Oil & Gas Co.'s No. 1 Simon, C NE NE Sec. 29-17s-32e.
Location.

Bernalillo County

Norins Realty Co., Inc.'s No. 1 Gallegan grant, C NW NW Sec. 19-11n-4e.
T.D. 500 ft.; S.D.O.

Chaves County

Comanche Drlg. Co.'s No. 2 Sloop-Purcell, C NE NE Sec. 15-11s-26.
Location.
Los Chaves Dev. Co.'s No. 1 Government, C NE Sec. 2-5s-23.
Spudded and S.D.
John Tannehill's No. 1 Campbell, NE SE NE Sec. 1-11s-25.
T.D. 801 ft.; 8¼-in. parted; fshg.
Warman Oil Trust's No. 1 Weldon & Hoar, NW NW SE Sec. 9-14-25.
T.D. 1,483 ft. in sand; P.B. to 1,440 ft. to test oil show at 1,390 ft., resetting plug.

San Juan County

Rio Grande Development Co.'s No. 2 Lanier, 2,310 feet from N and 1,650 feet from W lines of NW quarter Section 9-29-11w, San Juan County was dry and abandoned at 1,867 feet.

Continental Oil Co.'s No. 42 Rattlesnake, SW NE NW Section 12-29-19w had sand at 823-33 feet and made a 70 bbl. pumper. It was completed, and likewise No. 44 Rattlesnake, NW NE NW Section 12, which made a 40-bbl. pumper at 810-45 feet, No. 45 Rattlesnake, NE NE NW NW Section 12, was not so successful as it was dry and abandoned. It had barren sand at 859-900 feet. Phillips & Spence's No. 2 Martin, 970 feet from S and 1,670 feet from W lines of SW quarter Section 34-30-11 was completed as a 250,000 foot gas well from sand at total depth of 1,100 feet.

Aztec Coop. Oil Co.'s No. 1 Aztec, SE SW Sec. 10-30n-11w.
Material on ground.
J. F. Cross et al's No. 1 Wilson, SW SW SE Sec. 17-30-11w.
S.D. 810 ft.
Cross & Poole's No. 1 Aztec, Sec. 1-30-11w.
Making water shutoff at 740 ft.
A. E. Haney's No. 1 Hare, SE SE Sec. 14-29-11w.
Set 6¼-in. csg. at 680 ft.
Kutz Canon O. & G. Co.'s No. 1 Day, SW SW SW Sec. 20-28-10.
Drlg. 4,389 ft.; increase in gas.
R. C. Oswell's No. 4 Government, SW SW NE Sec. 34-30-11w.
S.D. 1,790 ft.
R. C. Oswell's No. 6 Government, SE NE Sec. 33-30-11w.
Spudded and S.D.
Phillips & Spence's No. 2 Martin, NW SE SW Sec. 34-30n-11w.
Drlg. 1,110 ft. in shale; 8¼-in. at 80 ft.; 5-3/16-in. at 720 ft.
Reserve Oil Co.'s No. 6 Shaffer, SE NE SE Sec. 36-22n-14w.
Location.
San Juan Pet. Co.'s No. 1 Lemley, NE SE SE Sec. 32-30-11w.
S.D. 1,314 ft.
Nick Spatter's No. 1 fee, C NE SW Sec. 22-31-11w.
U.R. 8¼-in. to 1,480 ft.; drlg. at 1,500 ft.
H. C. Stratton's No. 1 Hart, SW NE SE Sec. 25-30-12w.
Abd. at 1,680 ft.
W. R. Webb's No. 1 fee, CEL NE NW Sec. 6-30-11w.
P.B. from 1,500 ft. to 1,350 ft.; set pipe and preparing to test.

San Miguel County

Cabra Springs O. & G. Co.'s No. 1 Thompson, SW NE NE Sec. 22-12n-22e.
S.D. 4,030 feet.
Cabra Springs O. & G. Co.'s No. 2 West Pino Mesa, SW SW SW Sec. 31-12-22.
S.D. 726 feet.
Pioneer Oil Co.'s No. 2 Montezuma, CSL SE SW Sec. 14-15n-16.
Drlg. 300 feet.
Starr-Kennedy Oil Co.'s No. 3 Adams, NE NE SE Sec. 25-17-16.
Standing at 5,090 ft. after completing rig; to resume following fire.
Holmberg Interests' No. 1 Cantwell, NW NW NW Sec. 5-10n-9e.
S.D. 810 ft. (corrected).
Kelsey Clients Dev. Estate's No. 2 State, C NW Sec. 22-10n-16e.
S.D. 1,450 ft.

Torrance County

48 Pet. Co.'s No. 1 Greenfield, C NW SW Sec. 17-9n-8e.
T.D. 1,310 ft., fishing for tools.

Union County

Sierra Grande Oil Corp.'s No. 1 Rogers, C NE SW Sec. 4-29-29.
T.D. 2,715 ft., in granite.

Valencia County

Pres-Sel Dev. Co.'s No. 1 Morris, SE NE Sec. 30-12n-10w.
Drlg. 600 ft.
Ringle Dev. Co.'s No. 2 Tome grant, C NE SE Sec. 20-6n-3e.
Rigged and S.D.
Ringle Dev. Co.'s No. 1 Tome grant, C SE SE Sec. 36-6n-3e.
S.D. 400 ft.
Western Natural Resources Corp., Inc.'s No. 2 San Clemente, SE SE NW Sec. 5-6n-1e.
T.D. 6,001 ft.

Rio Arriba County

El Verdo Structures Property Co., Ltd.'s No. 1-A Tierra Amarilla grant, NE Sec. 26-2s-1e (unsurveyed).
Rigging up.

Roosevelt County

Claudell Dev. Co.'s No. 1 Wilmes, C SW SE Sec. 21-2s-30.
T.D. 3,655 ft.; P.B. to 3,385 ft.; shot with 12 quarts 3,345-67 feet, dry and abd.
R. M. Hancock et al's No. 1, 33 ft. from W line and 1,000 ft. from N line, Sec. 21-1n-37.
Drlg. below 200 ft.

Sandoval County

Continental Oil Co.'s No. 1 L-Bar Cattle Co. 630 ft. N and E ¼ cor. Sec. 8-13n-4w.
Drlg. 2,940 ft. in red shale.

WYOMING

Albany County

The Ohio Oil Co. has a faiure on the Two Rivers anticline in its No. 1 Two Rivers Land & Cattle Co. on the SW SW NE of Section 8-17n-74w. This important test of a highly regarded structure developed water in the Muddy sand at 1,930 feet and also in the Dakota and Lakota sands. It had water in the upper part of the Sundance sand at 2,446 feet and after drilling a few feet deeper will be abandoned.

Albany County

California Co.'s No. 2 Holst, SW NE SE Sec. 13-17n-77.
Drlg. 1,865 ft.
California Co.'s No. 1 Wilson, NW SW SW Sec. 18-17n-76.
Drlg. 485 ft.

Big Horn County

J. W. Bales' No. 1 Parker, C SW SW Sec. 23-49-89.
Drlg. 350 ft.
Peter Evanoff's No. 1 Griffin, Lot 60, Sec. 4-55-97.
S.D. 1,594 ft.
Peter Evanoff et al's No. 1 McAllister, Lot 50, NW NE SE Sec. 3-55n-97w.
Drlg. 800 ft.
W. S. Gilbert's No. 1 Zaring, SE SE SE Sec. 35-52-93w.
Drlg. 575 ft.
McAlpine O. & G. Co.'s No. 2, SE SE NW Sec. 3-55n-97w.
Moving in materials.
Ohio Oil Co.'s No. 2 Sidon Canal, C SW SW Sec. 24-56-97.
T.D. 5,275 ft.; top Tensleep sand 5,139 ft.; swabbed 350 bbls. oil; R.U. to pump.
Ohio Oil Co.'s No. 3 Byron Union, SE NW NE Sec. 22-56-97.
Drlg. 4,055 ft.
Ohio Oil Co.'s No. 4 Byron Union, SW NE Sec. 22-56-97.
Rig up.
Ohio Oil Co.'s No. 3 Sessions, NW SW NW Sec. 33-56n-97w.
Derrick up.
Peay Oil Co.'s No. 2 Government, SE SE SE Sec. 10-55n-97w.
Moving in material.
J. H. Shaffer's No. 1 Keachie, C SW SW Sec. 7-49-91.
Drlg. 1,170 ft.
Taylor Oil Co.'s No. 1 Hoskins, Lot 5 (SE SE), Sec. 25-56-97.
C.O. to bottom at 5,275 ft. and making new hole.
Wyoming O. & R. Co.'s No. 1 Evans, NE NE NW Sec. 12-49-91.
Set 1½-in. at 85 ft. (cor.) and S.D.

Carbon County

The Ohio Oil Co. encountered water in the lower Sundance sand section at 3,520 feet and is plugging back to test a showing of oil in the upper bench of the Sundance, top at 3,212 feet, in its No. 4 Diamond Cattle Co., SE SW NW Section 35-20n-78w, in the Rock River Field. This is an old well completed in 1921 for 400 bbls. of oil in the Dakota sand at 2,822 feet.

Carbon County

Ohio Oil Co. and California Co.'s No. 2 State, C NW NW Sec. 36-21n-79w.
Drlg. 2,174 ft.
Ohio Oil Co. and California Co.'s No. 1 Union Pacific, Acct. J, NE SW NW Sec. 25-21-79w.
Derrick up; W.O. tools.
General Pet. Corp.'s No. 1 Whitford, SW SE SE Sec. 24-20-84.
Drlg. in Frontier formation 4,665 ft.
General Pet. Corp.'s No. 1 Union Pacific, C SW SW Sec. 19-20-83.
S.D. 5,931 ft.; may be deepened.

Converse County

Chadron-Osage Oil Co.'s No. 1 State, SW cor. Sec. 16-32-69.
Drlg. in shale 755 ft.
Continental Oil Co.'s No. 60 State, NW SW NE Sec. 9-33-76.
Drlg. 1,307 ft.
Continental Oil Co.'s No. 9 Whiteside, 3,680 ft. S of N line and 1,072 ft. W of E line, Sec. 7-33-76.
Repairing motor at 4,451 ft.
Otto Olson et al's No. 1 Carey, Sec. 6-32-74.
S.D. 642 ft.
John Ackard's No. 1 Daniels, SW SW SE Sec. 17-32-71.

Crook County

Dr. R. B. Kinter's No. 1 Rockfort-Wyoming, CNL NE SE Sec. 13-52n-62w.
Drlg. 1,320 ft.; 5 3/16-inch cem. 1,305 ft.

Fremont County

Mid-American Oil Co.'s No. 3 Government, NW NE SW Sec. 24-28-92.
Fishing for parted 10-in. casing 800 ft.
Monongahela Oil Co.'s No. 1 Wisda, NE SE SE Sec. 13-28-93.
S.D. 4,150 ft. for water.
Nelson & Poupiert's No. 3 Enos, Lot 7, Sec. 27-3n-1w.
Drlg. 800 ft.

Hot Springs County

Argo Oil Co.'s No. 1 Rathvon-Government, NE SW NW Sec. 14-44n-98w.
Drlg. 825 ft.
California Exploration Co.'s No. 2 Government, NW SW NW Sec. 7-44-96.
S.D. for water 2,518 ft.
Ohio Oil Co.'s No. 73 Millsiron Cattle Co., NE SE SE Sec. 19-46n-98w.
Derrick.
Oscar G. Grace's No. 1 Government, SW NW NW Sec. 21-43-92.
Drlg. 430 ft.; tested 2 bbls. oil, pumping, in sand 405-15 ft.

Lincoln County

Senrab Oil Co.'s No. 3 Government, N SE NW Sec. 10-26-113.
S.D. 1,011 ft.
Superior-Wyoming Oil Co.'s No. 2-B, Lot 3 (NW NW), Sec. 3-26n-113w.
Drlg. 700 ft.

Niobrara County

Continental Oil Co. has completed for the account of its subsidiary, Buck Creek Oil Co., its No. 2 Schuricht, C SE NE of Section 6-35n-65w, in the Lance Creek Field. The well was drilled to 3,872 feet and had oil-saturated cores in the third bench of the Sundance sand at 3,781-3,839 feet. It produced at the rate of 89 bbls. of oil an hour on a 15-hour drill-stem test.

Argo Oil Co.'s No. 4 Elliott, C NE NW Sec. 5-35n-65w.
Coring 3,540 ft.
Black Hills Ref. Co.'s No. 1 Wright, SE SE SW Sec. 22-36-94.
Some material on location.
Continental Oil Co.'s No. 5 Rohiff, 550 ft. E of W line and 580 ft. N of S line, SW Sec. 31-36n-65w.
Derrick up; M.I. rotary tools.
J. H. Huber Co.'s No. 1 Joss, NE SE NW Sec. 6-35n-65w.
Moving in material.
Interstate O. & R. Co.'s No. 1 Morrell, NW NE SE Sec. 9-39-61.
T.D. 3,030 ft.; P.B. to 2,835 ft. and preparing to acidize.
Rail River Royalty & Producers Co.'s No. 3-I, CEL NE NE Sec. 2-39-61.
Comp. 385 ft.; pumping 3 bbls. oil daily 362-78 ft.
Fall River Royalty & Producers Co.'s No. 5-L Briggs, CSL NE NE Sec. 2-39n-61w.
Drlg. 300 ft.
Ohio Oil Co.'s No. 5 Converse Sheep, C SE SW Sec. 32-36n-65w.
Rig up.
Ohio Oil Co.'s No. 7 Lamb, C NW NE Sec. 5-35n-65w.
Rig up.
Ohio Oil Co.'s No. 2 Lamb, NE NW NE Sec. 5-35-65.
T.D. 3,707 ft.; 4½-in. at 3,642 ft.; R.U. pumping unit.
Ohio Oil Co.'s No. 4 Putnam, C SW SW Sec. 33-36-65.
Drlg. 1,180 ft.
Riggs Drlg. Co.'s No. 1 Spaugh, NW NW SE Sec. 5-33n-65w.
Location (first report).
S. & H. Dev. Co.'s No. 1-A Olinger, SE NE NW Sec. 1-36-63.
Cmtd. 5 3/16-in. on bottom at 1,550 ft.

Park County

Geo. T. Beck's No. 1 fee, NW SE NW Sec. 27-53-101.
Drlg. 1,300 ft. with 6⅝-in. set at 990 ft.
Garland Oil Co.'s No. 2 Government, SE NE NW Sec. 14-56-98.
S.D. 2,160 ft.
V. M. Kirk's No. 1 Connaghan, C NW SW Sec. 10-50-100.
Abnd. 1,400 ft.; water in first Wall Creek sand.
Resolute Oil Co.'s No. 1 State, C NW SW Sec. 16-57-101.
S.D. 3,608 ft.

Sheridan County

Beaver Creek Oil Synd's No. 1 Allison, SW SE Sec. 15-55-85.
S.D. 2,660 ft.

Sublet County

Texas Co.'s No. 5-K, SE SE SW Sec. 34-27-11E.
Completed at 824 ft. for 50 bbls. oil.
Piney-LaBarge Oil Co.'s No. 2 Government, CEL NE NW Sec. 18-28-113.
Drlg. below 520 ft.

Sweetwater County

Vermillion Oil Co.'s No. 1 Government, SW SW SW Sec. 7-12n-99w.
Location (first report).
Wyoming-California Pet. Co.'s No. 1 Government, SE cor. Sec. 20-16-104.
Testing gas show 2,395 ft.

Uinta County

General Pet. Corp. of Utah's No. 1 Union Pacific-Hayes, SW NW SW Sec. 29-14n-11Sw.
Resumed at 950 ft.

Washakie County

Wyoming Oil & Refining Co.'s No. 3 Brome, SW NW NW of Section 31-48n-90w, has been completed in the Frontier at 1,535 feet for an initial production of 250 bbls. of oil a day, flowing. This is the best well ever completed in the Hidden Dome Field, but as it is an inside location it does not extend the productive area of the field.

Ariton & Doyle's No. 1 Government, SW SW SE Sec. 29-48n-91w.
Moving in material.
Nystrom & Smoot's No. 2 State, SW NE NE Sec. 36-48n-90w.
Drlg. 1,738 ft.
Wyoming O. & R. Co.'s No. 1 Frison, NW SW NW Sec. 14-48-91.
Drlg. 1,710 ft.

Weston County

Conway Oil Corp.'s No. 1 Government, C SE NW Sec. 7-41-60.
Running 6¼-in. to 2,000 ft.
Karl Kundy's No. 3 Government, NW cor. NE Sec. 31-46-63.
Sands at 1,370-78 and 1,400-07 ft.; est. 25 bbls.; will deepen and shoot.
Beaver Creek Oil Synd.'s No. 1 State, C NE NE Sec. 23-44-63.
Drlg. 150 ft.
Des Moines-Osage Syndicate's No. 10, NE NE NE Sec. 25-36n-64e.
Spudding.
La Lleishe Oil Co.'s No. 18 fee, C SW SW Sec. 17-46-63.
S.D. 500 ft. for repairs.
L. C. Packham's No. 1, NW NW NW Sec. 19-46n-63w.
Resumed at 450 ft.; R.U. to run 8¼-in. to bottom.
Albert Jones' No. 10 Bock, CSL NW NE Sec. 21-46n-63w.
Spudding 100 ft. (first report).

COLORADO

Adams County

Riddle Pet. Co.'s No. 1 Baxter, C SW Sec. 2-3s-66w.
Standing partly rigged and drlg. wtr. well; T.D. 940 ft.; 6¼ ft. cmt. at 900 ft.; drlg. plug.

Archuleta County

Wm. E. Hughes Est.'s No. 1 fee, SW Sec. 24-33n-2e (unsurveyed).
Drlg. at 1,200 ft. with showing of oil at 1,090 ft.
Oil City Pet. Co.'s No. 1-A Garnett, NW NE NW Sec. 25-33n-2e.
Drlg. at 1,292 ft.; carrying 6¼-in. at 1,265 ft.
Navajo Oil Co.'s No. 1 Crowley, SW SW NE Sec. 11-32n-1e.
Drlg. at 830 ft.

Baca County

J. H. Everett et al's No. 1, 330 ft. NW cor. Sec. 24-32-48.
Spudded wtr. well.

Boulder County

Leslie R. Steele et al's No. 1 Maxwell, SW NE NW Sec. 24-1n-71.
Drlg. at 1,575 ft.

Elbert County

Ramsey Pet. Corp. and C. E. Lambert's No. 1, near C Sec. 13-8s-57w.

Fremont County

Waterville Oil Co.'s No. 1 State, SE SE NW Sec. 16-18s-69w.
T.D. 2,780 ft.; 150 ft. of oil in hole; U.R. 6 3/16-in. at 2,750 ft.

Grand County

Colorado Oil Ref. Co.'s No. 1 Linke, NE SW SW Sec. 13-1n-77w.
Drlg. at 2,300 ft.; showing gas and some oil.
Interstate O. & G. Co.'s No. 1 Hinman, NE SE NW Sec. 11-2n-81.
S.D. 2,997 ft.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Sec. 10-26-69.
S.D. 2,550 ft.

Jackson County

Colorado Oil Ref. Co.'s No. 1 North Park Coal, NW NW Sec. 18-9n-78.
T.D. 1,805 ft.; running 12½ to set at 1,800 ft.

Continental Oil Co.'s No 3 Hoye, NW NW NE Sec. 34-9n-78.
Drlg. at 3,701 ft.

Jefferson County

Ruby Hill O. & G. Co.'s No. 1 Braden, SE cor. Sec. 24-4s-69.
S.D. 4,280 ft.

Las Animas County

Mountain State Oil Corp.'s No. 1 Nickols, C NE SE Sec. 10-34-62.
S.D. 1,640 ft.

Lincoln County

Consolidated Smelting & Metals Co.'s No. 1 Hancock, NE NE Sec. 7-17s-52.
T.D. 1,700 ft.; fishing for bailer.

Moffatt County

Stanolind O. & G. Co.'s No. 5-S Parkinson, NW cor. SE Sec. 22-4n-92.
Cmtd. 13⅜-in. at 112 ft.
Texas Co.'s No. 2 Iles Investment, 620 ft. S of N line, and 220 ft. E of W line, Lot 4, Sec. 23-4n-92.
Coring at 3,448 ft.
Mountain Fuel Supply Co.'s No. 1 Murdock, SE SE NE Sec. 24-12n-101.
Suspended location.

Montezuma County

McElmo Oil Co.'s No. 1 West, NE NW NE Sec. 21-36n-17w.
T.D. 3,131 ft.; reamed to 3,000 ft. and running 6⅝-in. csg.

Morgan County

Swisher et al's No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, Sec. 3-4n-60.
Ran 4½-in. to 820 ft. and drlg. ahead.

Park County

South Park Oil Co.'s No. 1 State, SE SE SW Sec. 19-11s-75.
Drlg. 2,284 ft.

Prowers County

Trojan O. & G. Co.'s No. 1 Lotus Oil, NW NE NE Sec. 15-23-46.
Drlg. 5,324 ft.

Routt County

Mid-Colo. Pet. Co.'s No. 1 Omhalt, NE NE SE Sec. 29-4n-87w.
T.D. 2,750 ft.; preparing to run 8¼-in. to bottom wtr. in Dakota; show of gas at 2,750 ft. on top Lakota.

UTAH

Mountain Fuel Supply Co.'s No. 2 Murphy, NE NE Sec. 21-3n-24w.
T.D. 6,790 ft.; P.B. to 5,750 ft. to complete as gas well in the Dakotas.

Grand County

Columbia Crude Co.'s No. 1 Balsey, SW SE Sec. 12-25s-20e.
Rigged up and ready to spud.
Utah Southern Oil Co.'s No. 1 Hyde, SE NW NW Sec. 3-22s-22e.
Rig up; moving in tools.

Summit County

Longwell Pet. Co.'s No. 1, SE SW SE Sec. 35-3n-5e.
Resuming at 850 ft.; trying to U.R. 10-in. to bottom to shut off wtr.

Utah County

Diamond Oil Co.'s No. 4 Government, CSL SE NW Sec. 16-8s-5e.
Drlg. 3,735 ft.; showing considerable gas.

Washington County

Arrowhead Pet. Co.'s No. 2 Escalante, NW NW NE Sec. 19-43-15.
T.D. 4,114 ft.; P.B. to 3,250 ft.; shot and C.O.
Arrowhead Pet. Co.'s No. 1-A, SE SW NE Sec 1-43-15.
Drlg. 1,400 ft.

MONTANA

Big Horn County

Daniels Pet. Co.'s No. 1 May, C SE Sh. Sec. 13-1s-33e.
Drlg. 2,100 ft.
Enterprise Oil Co. et al's No. 2 Lynde, SW SW SE Sec. 21-6s-35e.
Drlg. 3,700 ft.

Carbon County

Bailey Round Butte Oil Co.'s No. 1, 1,120 ft. W of E line and 2,140 ft. N of S line, Sec. 3-6s-23.
Drlg. 1,304 ft.
Ohio Oil Co.'s No. 15 Montana Industrial, C NE NE Sec. 11-7s-21.
T.D. 4,350 ft.; will complete as a gas well in Frontier; C.O. and showing 7,000,000 ft. a day.

Cascade County

C. Leonard Smith's No. 1, NE NE SW Sec. 14-22n-2e.
Fort Worth spudder on location.

Choteau County

Mills & Decker's No. 1, NE NW Sec. 29-27n-13e.
Spudding.

Fallon County

Montana-Dakota Utilities Co.'s No. 1, NE NW Sec. 17-3n-62e.
Rig up; moving in rotary tools.

Fergus County

Button Butte O. & G. Co.'s No. 1 Woodward, SE SE SW Sec. 20-14n-24.
Drlg. 3,095 ft.
Emmons et al's No. 1, 220 ft. W of E line and 2,140 ft. N of S line, Sec. 6-20-18.
Drlg. 1,290 ft.
S. W. Pennock et al's No. 1 Nordheim, NW NE NE Sec. 6-21n-18e.
S.D. 480 ft. (corrected).

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PETROLEUM ELECTRIC POWER CLUB

E. A. Fenholt's No. 1, NW NW SW Sec. 24-21n-17e.
Moving in drilling machine.
Judith Operating Co.'s No. 1 Gov't., C SW SW Sec. 26-22n-17e.
Spudding.

Cellatin County

Montana Gas & Pet. Corp.'s No. 1 Adams, SE SE SE Sec. 36-3n-1e.
S.D. 2,400 ft.
Ben W. Ryan's No. 1 Tice, NE NE NE Sec. 28-1n-2e.
Drlg. 2,438 ft.

Glacier County

Several wells at Cut Bank are near completions. Consolidated Gas Co.'s No. 8 Tribal, Lot 6 (C SW NE, corrected) of Section 10-34n-6w, a near completion in Ellis shale at 2,995 feet, is testing after a 30-quart shot in Cut Bank sand at 2,925-48 feet. It had the top of the Colorado shale at 575 feet. Elevation is 3,792 feet.

Santa Rita Oil & Gas Co.'s No. 5 Tribal, C SW NW Section 15-35n-6w, is a near completion, having cemented the 7-inch production string in the top of the Cut Bank sand at 2,894 feet. It had a showing of oil.

Texas Co.'s No. 1 Morgan, C NE NW Section 33-33n-5w, is drilling in after recementing 7-inch casing at 3,030 feet.

Anderson's No. 2 Anderson, NW SE NW Sec. 26-35-6w.
Drlg. 2,732 ft.
Chas. Grant's No. 1 Askins, Lot 24, Blk. 33, Sec. 12-33-6w.
S.D. 2,700 ft.; (formerly Askin's No. 1 Askins).
Consolidated Gas Co.'s No. 2 State, C NW SE Sec. 26-35-6w.
Drlg. 2,610 ft.
Consolidated Gas Co.'s No. 7 Tribal, Lot 5 (NW NE) Sec. 10-34n-6w.
Drlg. 2,355 ft.
Custer Oil Co.'s No. 1 Tweedy, 440 ft. from W line and 330 ft. from N line, NE Sec. 36-33n-6w.
Drlg. 1,680 ft.
Goodstein & Smith's No. 1 Olson, C NE SE Sec. 26-34-6w.
Drlg. 2,260 ft.
Grant Oil Co.'s No. 1 Bakke, C NW NE Sec. 32-34-5w (formerly R. C. Jeffries).
Drlg. 2,610 ft.
L. R. Hannah, trustee's No. 2 State, 93 ft. from E line and 158 ft. from N line, Sec. 12-33n-6w.
Rig on location.
R. C. Jeffries' No. 3 Lukens, 360 ft. N of S line and 1,540 ft. S of E line, Sec. 1-33n-6w.
Rig on location; Spudding at 200 ft.
Lawler & Hoer's No. 1 Downen, C SE SW Sec. 9-33-5w.
Running 6⅝-in. 2,867 ft.
Montana Headlight Oil Co.'s No. 2 Britton, 660 ft. E of W line and 440 ft. N of S line, SE Sec. 11-34n-6w.
Drlg. 1,550 ft.
Montana Power Gas Co.'s No. 1 Colburn, C SE SW Sec. 5-33n-5w.
Spudding 260 ft.
Montana Power Gas Co.'s No. 1 Clapper Unit, SW SW SW Sec. 27-35n-5w.
Drlg. 1,975 ft.
Montana Power Gas Co.'s No. 2 Bonnett, C SW NW Sec. 4-32-5w.
6⅝-in. cmtd. 2,895 ft.
Olive Oil Co.'s No. 4 Winkler, 725 ft. S of N quarter cor. Sec. 35-35-6w.
Drlg. 2,290 ft.
Santa Rita O. & G. Co.'s No. 2 McCabe, NW SE NE Sec. 31-33-5w.
Location.
Santa Rita O. & G. Co.'s No. 1 Stahl, C NW SE Sec. 20-33-5w.
Drlg. 2,250 ft.
Santa Rita O. & G. Co.'s No. 1 Savage, C NW SW Sec. 9-33-5w.
Drlg. 2,790 ft.
Santa Rita O. & G. Co.'s No. 5 Tribal, C SW NW Sec. 15-35-6w.
7-in. cmtd. 2,894 ft.; showing of oil.
R. C. Tarrant's No. 4 Miller, C SE NE Sec. 24-34n-6w.
Location.
R. C. Tarrant's No. 2 Getty, NW NW SE Sec. 2-34-6w.
T.D. 2,700 ft.; will skid rig.
R. C. Tarrant's No. 4 Britton, C SW SW Sec. 12-34-6w.
Rig on location.
R. C. Tarrant's No. 6 Haglund, Jr., C SE NW Sec. 13-34-6w.
Rig on location.
R. C. Tarrant's No. 2 Larson, C W½ W½ NE Sec. 12-34-6w.
Location.
R. C. Tarrant's No. 2 McClellan, C NW SE Sec. 12-34-6w.
Drlg. 1,580 ft.
Texas Co.'s No. 1 Peterson, C SW Sec. 23-36n-6w.
Rig up.
Texas Co.'s No. 1 Morgan, C NE NW Sec. 33-33-5w.
Recmtd. 7-in. csg. 3,030 ft.; drlg. in.
Texas Co.'s No. 1 Small, C NW NE Sec. 23-25n-6w.
Drlg. 1,800 ft.
Texas Co.'s No. 1 Section 9 Unit, C NW SE Sec. 9-32n-5w.
Drlg. 352 ft.
Texas Co.'s No. 1 Tweedy, C N½ NE Sec. 21-35n-6w.
Drlg. 2,595 ft.
Watson & Kistner's No. 1 Britton, C SE SE Sec. 14-34n-6w.
Drlg. 325 ft.

Liberty County

John Wilde's No. 2-A Mahoney, CWL SE SW Section 23-37n-4e, in the Whitlash Field of northern Montana, has been completed in basal Colorado shale at 1,680-1,720 feet for an initial production of 10 bbls. of oil.

Petroleum County

Hardendorf & Keyes' No. 1 Austed, SW NW SE Section 22-13n-28e, near Rattlesnake Butte, is suspended after spudding.

Phillips County

Little Rocky Dev. Co.'s No. 1, SE SE SE Sec. 17-24-24.
S.D. to finance at 352 ft.

Pondera County

Norden Corp., Ltd.'s No. 1 Hollan, NW NW NW Sec. 12-28n-6w.
S.D. at 500 ft. to complete leasing.
Texas Co.'s No. 1 Unit 5, C SW SW Sec. 3-30-5w.
Drlg. 2,485 ft.

Stillwater County

Continental Oil Co.'s No. 1 Parker, 500 ft. N of S line and 660 ft. E of W line, SE Sec. 25-5s-17e.
Cellar and pits.
Continental Oil Co.'s No. 1 Orr, SW NW SE Sec. 18-5s-17e.
Coring 3,557 ft.

Toole County

There were no completions in the Kevin-Sunburst Field the past week, but one well is a near completion. Two wells were abandoned and two new locations were released.

Texas Co.'s No. 10 Fenna Bruins, C S half SW Section 10-35n-2w, after cementing 7-inch production string at 1,530 feet with 10 sacks, is completing the well in the Ellis-Madison contact at 1,615 feet.

A. Beardslee's No. 4 Swears, NE SE NW Section 9-35n-2w, found the Sunburst sand dry at 1,410-25 feet and has been indefinitely suspended at 1,620 feet, in the top of the Ellis-Madison contact, which was also dry.

New Era Fuel Co.'s No. 1-A Halter, CWL NW NE Section 21-35n-2w, formerly an operation of L. P. Jackson, was a dry hole at 1,410 feet. It had a small showing of oil in Sunburst sand at 1,275-92 feet.

Cassidy and Cassidy's No. 1 Veitch, 220 ft. W of E line, 660 ft. N of S line, Sec. 31-35n-2w.
Drlg. 470 ft.
Coolidge & Coolidge's No. 2 Government, SW NE SE Sec. 35-36-2w.
Drlg. 620 ft.
A. C. Crumley's No. 6 Shaw, SW NW SE Sec. 35-26-2w.
Drlg. 1,545 ft.
Crumley & Son's No. 4 Fryberger, NW SE SE Sec. 24-35-3w.
Drlg. 1,312 ft.
P. L. Eddy's No. 5 Seabrook, NE SW SW Sec. 19-35-2w.
Spudding.
Fraser & Kluth's No. 1 Severance, C SE NE Sec. 29-32-2e.
Drlg. 1,565 ft.
Graham Oil Co.'s No. 3 McDonald, CEL SW SW Sec. 19-35n-2w.
Spudding at 105 ft.
T. P. Kyle's No. 1 Clark, SW SW SE Sec. 19-27n-1e.
Running 8¼-in. at 1,620 ft.
Fred R. Mauger's No. 1 Government, SW NE NW Sec. 13-35n-2w.
Spudding.
Monopeg Oil, Ltd.'s No. 3 Dipple, S SW NW Sec. 28-35-1w.
Sidetracked tools at 1,335 ft.
Mon-Tex Pet. Co.'s No. 1 fee, NW SW Sec. 27-34-1w.
Drlg. 1,450 ft.; Sunburst dry at 1,360-70 ft.
E. O. Reickhorr's No. 2 Government, SW SW NE Sec. 3-35-3w.
Drlg. 250 ft.
C. Leonard Smith's No. 1 Eckhoff, C SE Sec. 6-33n-2e.
S.D. 575 ft. for new boiler.
C. Leonard Smith's No. 1 Federal Land Bank, C NE SE Sec. 11-33n-1e.
Spudding at 175 ft.
C. Leonard Smith's No. 1 I. Halverson, C NE SE Sec. 18-33n-2e.
Drlg. 1,000 ft.; showing 1,000,000 ft. gas.
C. Leonard Smith's No. 1 H. Halverson, NW NE Sec. 18-33n-2e.
Rigging up rotary at 350 ft.

Texas and Louisiana Gulf

TEST IN JACKSON COUNTY IS NEW CENTER OF ATTRACTION

By F. L. SINGLETON

HOUSTON, Tex., Aug. 12.—Attention on the Gulf Coast at the close of the week was centered on the wildcat test of Shell Petroleum Corp.'s No. 1 Coombs, located in the Midfield area, east central Jackson County, which made its appearance as a possible pool opener when it tested 15 thribbles of oil and mud on a 15-minute drill stem test from 5,634-42 feet, with the pressure building up to 110 pounds on a one-quarter inch choke on top and bottom. Another 8-foot core was taken to 5,650 feet, the total depth, and the operators recovered 2 feet of sand and will probably run casing to test. It topped the sand believed to be the Frio at 5,627 feet.

The test is situated on a large block in Section 33, Morris and Cummings Survey, 6 miles southwest of the Louise Field, and it is the second test to be drilled in the area. The first test, No. 1 McCrory, was located to the northwest and was abandoned at 7,408 feet. It is possible that the McCrory test was located on the edge of the structure due to the fact that it showed for a gas well when it tested 525 pounds of pressure and showed a small amount of distillate on a drill stem test from 5,649-74 feet.

Harris County

An extensive development program is getting under way at the South Houston district, Harris County, since the Railroad Commission announced its spacing rule for the district which limits one well to 16 acres, with the allowable based on 50 per cent acreage and 50 per cent potential. Stanolind Oil & Gas Co., which discovered the field several weeks ago, is building derrick foundations for four tests located in the South Houston townsite. The locations include No. 1 Ed Wells, 2,270 feet north of the discovery in Block 146; No. 1 Hartow, 1,390 feet southeast in Block 82; No. 1 C. E. Gibson, northwest in Block 41, and No. 1 F. J. Burkey, northwest in Block 105, all of which are in the H.T.&B. Survey No. 5.

The company's No. 1 First National Bank, located north of the discovery well and the first test to be started outside of the townsite in the Callahan and Vince Survey, is drilling in sandy shale below 4,322 feet, and has not encountered any showings of oil or gas which is somewhat of a surprise, since the discovery well had two showings of oil and gas above this depth. After several unsuccessful attempts to bring the discovery well back on production which had to be killed due to mechanical trouble, the operators are drilling deeper in attempt to find another sand. It is drilling below 5,051 feet.

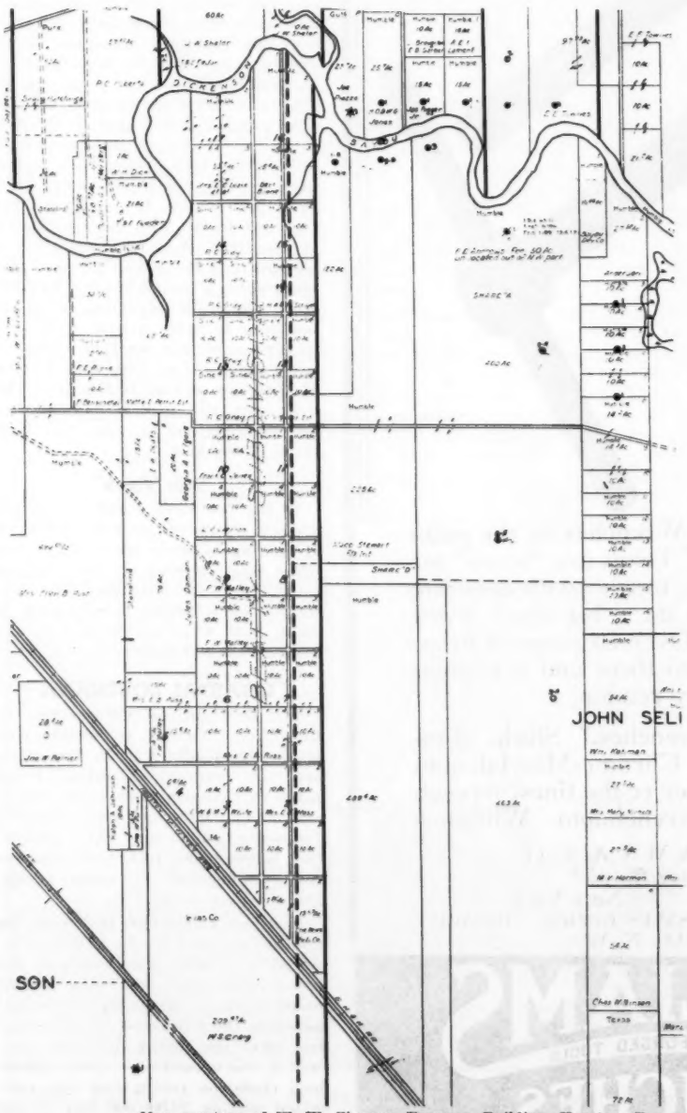
Old Ocean

At the Old Ocean district, Southwestern Brazoria County, Harrison & Abercrombie's No. 2 Bernard is drilling in sidetracked hole below 5,383 feet. The hole was sidetracked while the operators were reaming preparatory to running 7-inch casing to the top of the oil sand at 8,648 feet. The old hole was bottomed in oil sand at 8,662 feet. Location is in the Charles Breen Survey.

Anahuac

Considerable development is getting under way in the extension area of the Anahuac Field, northern Chambers County. Mason & McCarthy have spudded No. 2 White, west of No. 1 in the James McGahey Survey; Sun Oil Co. has cemented surface casing in its No. 1 White, south of the McCarthy producer in the James McCarthy Survey, and Gulf Producing Co. is moving in a rig for No. 1 Knowles, 2,154 feet south of the north line and 467 feet east of the west line in Section 48, H.&T.C. Survey. Two miles northwest of the McCarthy well, Woodley Petroleum Co. is building roadway for No. 1 Blanke, 330 feet north of the south line and 990 feet east of the west line in Section 41, H.&T.C. Survey. Four miles northwest of the latter test, C. B. Bunte (Texas Gulf Producing Co.) is moving in material for No. 1 Simon, 1,980 feet west of the east line and 990 feet south of the north line of Section 3, T.&N.O. Survey.

Humble Oil & Refining Co.'s No. 4 Middleton marked up another extension for the field when it was completed for an initial production of 743 bbls. per day through a one-quarter inch choke, with tubing pressure 1,120 pounds and casing pressure 1,200 pounds. It is bottomed in oil sand at 7,090 feet with 7-inch casing cemented at 7,048 feet. Location is due north of the discovery well in Section 58.



—Map courtesy of W. W. Zingery, Esperson Building, Houston, Tex.

Map of the Dickinson Field, Galveston County, showing location of producing and drilling wells in the field

Dickinson

In the Dickinson Field, Galveston County, Humble Oil & Refining Co.'s No. 2-A Maco Stewart, which flowed oil and salt water at a plugged-back depth of 8,510 feet, drilled out cement to 9,100 feet and after screen and liner was set and the tubing swung at 9,089 feet, it was completed for an initial production of 5 bbls. of distillate per hour through a one-quarter inch choke, with tubing pressure 3,050 pounds and casing pressure 3,200 pounds. It offsets the company's No. 1 Danielson, the deepest producer in the field which is producing crude oil from a depth of 9,140 feet. Along the Dickinson Bayou in the John Sellers Survey, Stanolind Oil & Gas Co.'s No. 1 State, topped the first oil show at 7,969 feet and is coring in shale with streaks of sand with an oil odor below 8,029 feet.

Colorado County

In Colorado County, Mid-Continent Oil Co.'s No. 1 D. E. Burnhardt, 1 mile northwest of Frelsburg in the J. Cummins Survey, topped the Vicksburg at 1,974 feet, Hockleyensis at 2,537 feet and is drilling in shale below 3,544 feet. Across the line in Wharton County, Sterling Oil & Refining Co.'s No. 1 Janik is drilling in sandy shale below 4,340 feet after it topped the Discorbis at 3,360 feet and the Heterostegina at 3,440 feet. Location is in the northwest part of the county in the Johnathan Scott Survey.

Victoria County

Southwest of the Colletto Creek Field, Victoria County, the Texas Co. is moving in a rig for its No. 1 J. J. Warden, 4,200 feet north 55 degrees east and 486 feet north 35 degrees west from the southwest corner of the Warden ranch in the Edward McDonough League Survey. It is to be a deep test and it is reported that the Magnolia Petroleum Co. has a half interest in the well.

Hastings

One completion and one location were reported for the Hastings Field, northeastern Brazoria County. Stanolind Oil & Gas Co. completed No. 1 Turner in the A.C.H.&B. Survey No. 1 for an initial production of 104

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bbls. in eight hours through a one-quarter inch choke with tubing pressure 875 pounds. It is bottomed in oil sand at 6,100 feet with 7-inch casing cemented at 5,990 feet. Location for No. 3 Grote was made 608 feet north and 764 feet west of the southeast corner of 71.62-acre lease in the A.C.H.&B. Curvey No. 2. The company's No. 4 Sneed, the most southwesterly test in the A.C.H.&B. Survey No. 2, is drilling in shale below 7,243 feet with no show of oil or gas. It proves the existence of a fault between it and the Paul test which is one of the highest wells in the field.

Washington County

Three miles southeast of Burton, Washington County, C. J. Laas has made location for his No. 1 T. Weinert, a wildcat test 1,840 feet southwest of the east corner of the southwest corner, thence 250 feet northwest at right angles in the T. P. Borden Survey. In the Willis area, Montgomery County, George C. Schmidt is clearing location for his No. 1 Delta Land & Timber Co., 2,800 feet north and 1,100 feet east of the southwest corner of the William McBride Survey, Abstract 360.

Liberty County

Magnolia Pipe Line Co. has laid a short 2-inch line from its main trunk line from West Texas to J. W. Frazier's No. 2 Lynott & Buffum, which opened a new field for Liberty County two weeks ago and is paying 93 cents per barrel for the oil. On a 36-hour gauge ending August 7, the well produced 441 bbls. of fluid through a one-quarter inch choke, with tubing pressure 560 pounds and casing pressure 1,640 pounds. It is making 8 per cent salt water. Two miles northeast of Cleveland, A. L. Maxwell's No. 1 Hinchliffe in the H.&T.C. Survey was plugged back from 5,570 feet to 5,494 feet, and while operators were attempting to make a drill stem test, the drill stem was stuck at 4,400 feet and twisted off at 2,900 feet, leaving 17 thribbles of pipe in the hole. The drill stem test was attempted after an electrical coring test had been made of the hole.

Van Vleck

In the Van Vleck Field, Matagorda County, Skelly Oil Co.'s No. 3-B Cobb is drilling in shale below 7,743 feet after sand showing oil was encountered from 7,692-7,706 feet. The company's No. 1 Turner is preparing to spud. Both tests are located in the M. Cummings Survey.

COASTAL LOUISIANA

The deepening of Continental Oil Co.'s No. 1 Ortego, a possible pool opener in Acadia Parish, Louisiana, and the favorable showings being made by two deep tests in the Roanoke Field, Jefferson Davis Parish, Louisiana, which may open production below 10,000 feet, were the featured developments in Coastal Louisiana the past week.

A second completion test made on Continental Oil Co.'s No. 1 Ortego resulted in a large gas well and the screen and liner is being pulled preparatory to deepening. It is bottomed in the Frio sand at 8,308 feet, and after the tubing had been lowered it was opened on a three-eighths inch choke on tubing and was estimated making 20,000,000 feet of gas with 1,500 pounds working pressure. While flowing through the separator it made approximately 20 gallons of distillate. It is on a block of 8,000 acres in Section 28-7s-2w.

At the Roanoke Field, Jefferson Davis Parish, Shell Petroleum Corp.'s No. 1 Jarnigan cored fine sand with a good odor of oil and gas from 10,313-17 feet, the total depth, and is building up the weight of the mud before coring ahead. Another core will probably be taken and it is expected to be tested. Sand with an odor of oil and gas was also cored from 10,311-14 feet. It is an east offset to the discovery well in Section 12-9s-4w. Humble Oil & Refining Co.'s No. 1 Thomas Nelson is coring in sandy shale below 10,405 feet and is reported to have gas in the ditch while coring below 10,300 feet. It is located in Section 11-9s-4w.

In the Gillis Field, Calcasieu Parish, Union Sulphur completed No. 11 State for an initial production of 405 bbls. per day through a one-quarter inch choke, with tubing pressure 2,100 pounds. It topped the sand at 6,738 feet and is producing from a total depth of 6,744 feet. Location is in Section 12-9s-8w.

Texas Co.'s No. 1 Riggolet Co-operative Fur Trapping Co. is drilling in sand and shale below 8,400 feet. Sand carrying oil and gas shows were encountered from 7,978-8,005 feet, but it was not tested. The company's No. 2 Bayou St. Dennis is preparing to sidetrack after plugging back from 6,479 feet. Both tests are in the Bayou St. Dennis Field, Jefferson Parish, which produces below 9,500 feet.

Canadian Production

OTTAWA, Canada, Aug. 10.—Official figures of the Dominion Bureau of Statistics show that the Canadian production of crude petroleum in May rose to 123,801 bbls. compared with 113,685 bbls. in April and 117,603 bbls. in May, 1934. Production in the first five months of 1935 was 594,222 bbls. against 607,600 bbls. in the same period of 1934.

New Brunswick production was 627 bbls. in May against 837 bbls. in April and 4,709 bbls. for the five months of 1935 against 4,900 bbls. in the 1934 period. Ontario production in May was up to 17,686 bbls. from 12,998 bbls. in April; and the five months' total of 66,916 bbls. in 1935 compared with 55,418 bbls. in 1934. The Alberta production of 105,488 bbls. in May compared with 99,850 bbls. in April; and the five months' total was 522,597 bbls. against 547,282 bbls. in the 1934 period.

Indiana Touring Bureau

CHICAGO, Aug. 10.—Standard Oil Co. of Indiana has opened at 910 South Michigan Avenue, Chicago, a touring bureau for furnishing motorists throughout its 13 states free information on motor trips to any part of the continent. All company stations are now supplied with form postage-paid cards addressed to the bureau upon which any motorist may check the information desired. The bureau answers the cards a few hours after their receipt. Answers to unusual requests are only slightly delayed to allow for the necessary research. The service man nearest the motorist's address is notified by the bureau the information has been requested and makes a personal call to check whether any further information is needed.

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Among Gulf Coast Drilling Contractors

George Echols is coring on a deepening job for Windsor Oil Co. on No. 2 Windsor in the Manvel Field, Brazoria County; is preparing to make a drill stem test at 4,000 feet in a well for the Uscan Oil Co. in the same field; and is rigging up his big gasoline rig in the Placedo Field to drill a well for the Sun Co.

H. J. Porter is working over a well for Wheelock & Collins in the Sam Fordyce Field, Hidalgo County; has just completed a well in the same field for the Windsor Oil Co.; and is completing a well in the Placedo Field for E. L. Smith, this being his second completion for this operator in the field.

L. W. Capps, who stuck his pipe and pulled his derrick in while trying to pull it on a well for Jack Porter in Austin County, has skidded rig and cemented surface pipe in a new hole; on a test for Mayo & Peveto north of Cleveland, Capps is drilling below 3,800 feet in shale; in the Willis area, Montgomery, on a test for Mid-Tex Oil Co., heavy artesian water flow has given some trouble; rig at Jennings, La., for H. M. Naylor is still waiting on orders.

Cron & Gracey have started a rig for British American Oil Co. in East Texas, in addition to the 10 other rigs which are running as reported last week.

Ben (Bud) Coyle is drilling No. 1 Erhardt for Fohs Oil Co. in the English Bayou Field, Lake Charles, Louisiana, and is rigging up in the same field to drill No. 6 Castle for the same operators.

W. L. Hines, formerly associated in an executive capacity with Amerada Petroleum Corp., has entered the drilling contracting business and is drilling a well for his former company near Gonzales, Tex. Hines has a new Model 876 enclosed drawworks supplied by the Portable Rig Co. of Houston.

C & C Drilling Co. is coring at 4,150 feet on No. 4 Watt for Gem Oil Co. in the Livingston Field, Polk County; and is preparing to rig up to drill a second well for Coastal Oil Co. in the Dickinson Field, Galveston County.

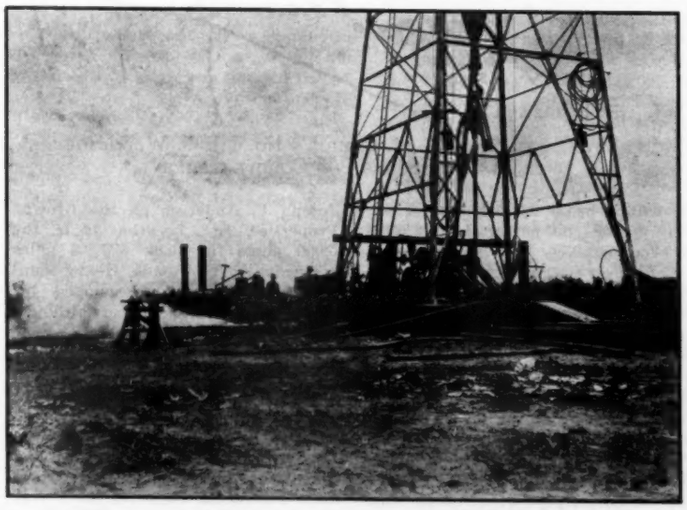
Talbot Drilling Co. is completing derrick and moving in rig to drill No. 1 Lucy Trice in the Willis area for Andy Anderson and others of Dallas. Location is 3,000 feet west of the Gholson well which recently caused a stir of excitement but failed to complete as a producer. Talbot is also moving in rig to drill No. 1 George C. Schmidt in the Wm. McBride Survey, Montgomery County, for the Delta Land & Lumber Co. Eight miles northeast of Conroe, Talbot is moving in a rig to drill a Cockfield test for Ellis Arline and others on the Foster Lumber Co. test.

Edwards Drilling Co. is drilling below 6,700 feet on a well for the Pure Oil Co. in the Dickinson Field, Galveston County; is drilling below 5,000 feet on a well for the Jefferson Lake Oil Co. near Abbeyville, La.; and is coring in a well for the Moretex Oil Co. in the Placedo Field.

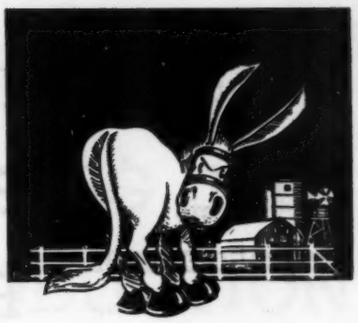
Alamo Drilling Co. is drilling at 5,400 feet on a well for Turnbull & Irwin, Shell Petroleum Corp., and Alamo Drilling Co. at Danbury, Brazoria County. Well is logging slightly more than 100 feet lower than the previously completed gas well 900 feet away, which is judged favorable for a good showing around the 6,200-foot horizon.

Jeff Hooper has set surface pipe in a well for the Navarro Oil Co. 12 miles north of Wharton, Wharton County; and is rigging up to drill a well in the Coleta Creek Field for Cox & Reed.

Harry H. Johnson, formerly in the land department for the Gulf Production Company at Midland, Tex., has been transferred to the same department at Houston, Tex.



Among the many drilling contractors who are keeping their rigs busy in Southwest Texas is Reddick & Hugus, one of whose rigs is here shown preparing to set casing in a well for the Texas Co. in the Loma Novia Field, Duval County. J. L. Wilson is tool pusher



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Southwest Texas District

RIO GRANDE VALLEY SECTION PRESENT CENTER OF INTEREST

By GEORGE WEBER

SAN ANTONIO, Tex., Aug. 12.—The Rio Grande Valley district was the center of interest in Southwest Texas this past week with completions in Sam Fordyce, and tests and new locations through the territory. The Laredo district also had its quota of completions, and a second producer in the new Nueces County Pool and a new test well for the Edwards lime in Bexar County drew interest to other points.

In the Sam Fordyce Pool in Hidalgo County, W. F. Lacey's No. 1 Seabury, in Tract 256, Porcion 38, was producing about 2 bbls. per hour through a one-eighth inch choke at 2,770 feet. No. 1-C Smith of the Cortez Oil Co. in Tract B-3, Porcion 41, was flowing some oil on a one-eighth inch choke, showing a tubing pressure of 675 pounds. It has been closed in. Henshaw and others' No. 1 Smith, in Tract B-3, Porcion 41, was also completed for its allowable this week.

Gulf States' No. 1 John Engleman, which was brought in last week, was placed on a one-eighth inch choke early this week, and produced a yellow distillate at about 30 bbls. per day with about 8,000,000 to 10,000,000 feet of gas. Later in the week the well stopped producing oil and made about 2,000,000 feet of gas with the pressure rising from 900 pounds to about 1,000 pounds.

Hidalgo County

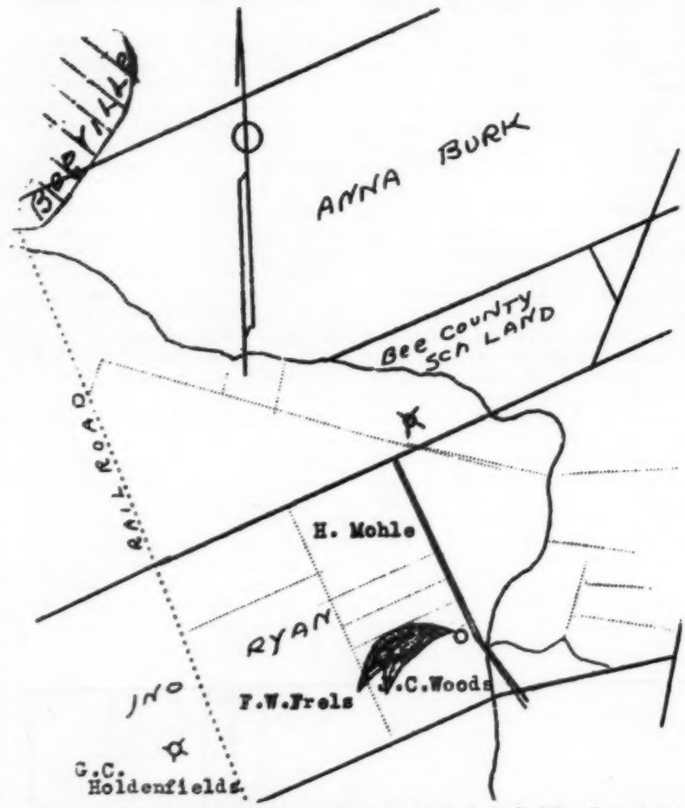
Wildcat activity in Hidalgo County continued strong with three wells approaching test depths. Downey and Morton's No. 1 Osca Daskam, about 12 miles west of Mission in Block 34, Porcion 45, Jurisdiction of Reynosa, was drilling plug in a sand at 4,115 feet. About 5 miles south of Mission, Maddox and Walter's No. 1 John Shary in Tract 21, Porcion 58, Jurisdiction of Reynosa, was drilling hard dry sand at 5,150 feet. Nearby, Bluff Petroleum Co.'s No. 1 Porcion Land Co., 3 miles southwest of Mission, was still standing at 5,539 feet awaiting orders.

Drilling continued steadily in the deep Mercedes Pool in southeastern Hidalgo County, with Union Sulphur Co. drilling plug on No. 1 American Rio Grande L. & I. Co. in Lot 229, Block 59, 7½ miles north of Mercedes. In the same field the company's No. 4 American Rio Grande L. & I. Co. was drilling below 6,200.

Harrison-Davis-Bishop's No. 3 Francisco Guerra in Block 12, Porcion 41, after being shut in last week, began making gas and water when completion was attempted through a three-thirty-seconds inch choke. The high gas pressure is believed to be preventing completion.

Surface casing was set this week on Mundy and Son's No. 1 Guerra, located in Tract 12, Porcion 41. The well will be drilled under contract to 4,000 feet or production. It is in the semicircle believed by some to be a dome, and will test this theory of the Sam Fordyce Dome.

W. F. Lacey is moving in material for the No. 2 Seabury, on a 625-acre tract in Tract 256, Porcion 38, following the completion of No. 1 Seabury. Henshaw and Rothers are spudding in No. 1 Seabury in Tract 258, Porcion 38. Gem Oil Co.'s No. 2-B Seabury in Tract 256, Porcion 38, is drilling below 2,825 feet after setting casing and perforating at a 2,311-foot sand.



Map shows location of G. M. Church's No. 1 J. C. Wood, interesting wildcat in the Bee County district

Webb County

A large producer in the Cole Field in eastern Webb County was brought in this week when James Nash's No. 1 Benavides, in Block 184, of the Arispe grant, was completed for 75 bbls. an hour at 2,798 feet. The well was flowing through open tubing.

In the Lopez Field of Webb County, G. G. Mortimer completed No. 1 Lopez for an initial production of 40 bbls. per hour through open tubing. This well is in Share 16, Survey 73, 660 ft. east of Mills Bennett's No. 2 Lopez.

Leasing in the district around Laredo continued active under the stimulus of the 73,000-acre lease taken by O. W. Killam last week. This lease on the L. R. Oritz pasture extends to the northwest, north and northeast of the city of Laredo. Much wildcat activity is anticipated by authorities in this district.

Cameron County

Considerable interest is taken in the new wildcat drilling in Cameron County. The well is to be drilled by Joseph F. Anderson on the Browne Properties, Inc. Location is in the 5,000 acres in Block 397, 3 miles northeast of Rio Hondo. Heavy foundations have been constructed for the 122-foot derrick, and although the contract calls for a minimum of 5,000 feet the equipment is heavy enough for a 12,000-foot well if a deeper test seems justified.

Duval County

In Duval County four completions were made in the past week. Magnolia Petroleum Co.'s No. 15 Duval County Ranch Co. in Survey 59, Government Wells Field, made 8 bbls. per hour at 2,203 feet. Also in the Government Wells Field, the company brought in No. 2 Herbst for 15 bbls. per hour through a three-eighths inch choke. This well, in Survey 70, is producing from sand at 2,798-2,808 feet.

Loma Novia

In the Loma Novia Field, Texas Co. completed No. 2 Hugo Wendt for an initial of 20 bbls. per hour at 2,663 feet. Magnolia Petroleum Co.'s No. 5 Hahl, in Survey 67, made 18½ bbls. per hour at 2,687 feet.

Nueces County

A second producer in the new Nueces County Pool opened recently by Magnolia Petroleum Co.'s No. 1 Baldwin, was brought in this week with the completion of the company's No. 1 Mattie Lou Sanders. The well made 54½ bbls. through an open 2-inch line during the first two hours of flow. The well is 6 feet in the sand at 4,060 feet, about 186 feet lower than the sand in No. 1 Baldwin. The oil produced is 24.8 gravity. The new field is 3½ miles southwest of the Saxet Pool. Houston Oil Co.'s No. 4 Rand Morgan in Section 7, Range 5, Rincon del Oso grant, was brought in this week as a 90-bbl. producer at 4,869 feet. This is the latest addition to the Saxet Pool.

Guadalupe County

A wildcat in Guadalupe County was making an estimated 20 bbls. per day after completion in the Austin chalk this week. The well, J. E. Clark's No. 1 Lay, is on the J. K. Davis Survey, 15 miles southeast of Seguin.

Bexar County

An Edwards lime test is under way in Bexar County, 3½ miles east of Elmdorf. E. H. Dunham and McClure's No. 1 San Antonio Sewer Pipe Co. is spudded in and the Edwards is expected around 2,600 ft.

Plymouth Field

Deep Oil Corp. completed two wells in the Plymouth Field of San Patricio County this week. No. 2-E Welder made 246 bbls. in six hours at 5,642-49 feet with a tubing pressure of 940 pounds and a casing pressure of 870 pounds. No. 3-E Welder flowed 15 bbls. per hour at 5,646 feet. At present nine wells are being drilled in this field.

Loma Alta

Late in the week it was announced Texio Oil Co.'s No. 1-B Atkinson, a wildcat 3 miles north of the Loma Alta Field in McMullen County, would not be drilled. Illinois Petroleum Co.'s No. 1 Atkinson, 1,320 feet north of the discovery well in the Loma Alta Field, is spudding. The success of this well will in a great measure decide the future activity around this district. Interest was only recently stimulated by a completion two weeks ago after two dry holes.

Michigan Field Report

By
PAUL A. ELLIOTT

CRYSTAL POOL LEAPING INTO FIRST PLACE IN PRODUCTION

MUSKEGON, Mich., Aug. 12.—The Crystal Township, Montcalm County field catapulted into first rank with the Porter Township, Midland County area last week when three new producers, one a 3-mile northwest extensioner, virtually doubled the daily potential output of the latest Michigan oil field, boosting it to about 30,000 bbls. a day.

The meteoric rise in production and the great new area opened by the 950-bbl. extension well were immediately recognized as a possible disturbing factor in the Michigan price structure when leading operators met and agreed upon a rigid proration schedule to keep the actual output within the limits of the current market, or about 12,000 bbls. a day.

A minimum exemption of 200 bbls. daily and an allowable of 40 per cent for all well potentials above the minimum was placed in effect Thursday, August 8, after a conference between representatives of the Michigan Regulatory committee, producers and pipe line concerns at Mount Pleasant.

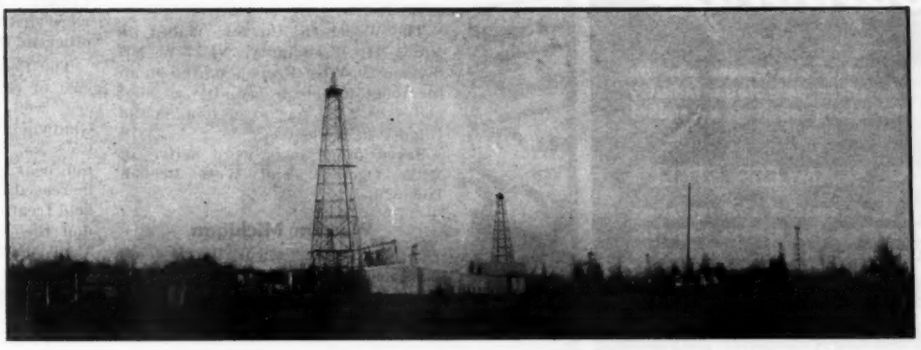
Those who attended the conference included: A. J. Weidman, proration umpire; David E. Beach, general superintendent of the Pure Transportation Co.; C. L. Maguire, head of the Simrall Pipe Line Co. and the Roosevelt Oil Refining Co.; Benjamin Skinner, head of the Mid-Western Pipe Line and Mid-West Refining companies; Howard D. Atha, Gordon Oil Co.; Walter Leonard, Jr., J. W. Leonard, Inc.; Robert and Crawford Daily, Daily Crude Oil Co.; Isaiah Leebove, Mammoth Petroleum and Isabella Oil companies; L. A. Clark, Eastern Gulf Oil Co. and Edward F. Claggett, Michigan manager, Pure Oil.

Crystal Extensions

Most important development since the completion of the discovery well on the Otto Durbin lease in Section 11, Crystal Township, was the initial flow of 45 bbls. an hour encountered in the United Producers & Royalty Co.'s No. 1 Ernest and Martha Conners, SE SW NW Section 26-11n-5w, Ferris Township, Montcalm County, located about 3 miles northwest of the Crystal discovery. Topped at 3,180 feet, the Dundee limestone produced 950 bbls. during the first 24 hours after striking the pay at 3,184 and drilling to a total of 3,240 feet, or considerably lower than most tests in the new field.

Of similar importance in proving several thousand additional acres in the Crystal area was T. F. Caldwell, Inc.'s No. 1 W. H. Pugsley well located SW SE NW Section 36, Ferris Township, which made 12,430,000 feet of gas daily in the Michigan Stray sands encountered from 1,026 to 1,031 feet. It is located about a quarter of a mile from the St. Louis Pipe & Supply Co.'s No. 1 Rosa Osterhaut well, a 2,000,000-foot gasser in the Michigan sands some weeks ago.

Gas blew the mud from the hole in the No. 1 Maude Evans, NE NE NE Section 33-10n-5w, Crystal Township, a semiwildcat being drilled by Charles Van Keuren, trustee, as it was being cased at 3,177 feet, or on top of the Dundee. Casing was cemented and the well was to be drilled in this week. It is located 2 miles southwest of the Crystal discovery and is the only test drilling in this vicinity. Its completion as a producer would reopen an area condemned by unsuccessful test eastward.



Portion of Porter Field, Isabella County, Michigan

Record Oil Wells

The two record oil wells of the Crystal Field, which with the United's Conners well boosted the potential daily flow to about 30,000 bbls. daily, were J. W. Leonard, Jr., trustee's No. 1 Mrs. Ida M. Husted, NE SW SW Section 2, Crystal Township, near the Crystal-Ferris Township line, and the McClanahan Oil Co.'s No. 2 Harry and Geneva Flint, SW NW NW Section 11, same township, directly west of the discovery.

The former topped the Dundee at 3,165 feet and was completed at 3,185 for an initial flow estimated at 9,000 bbls. daily. It flowed 350 bbls. the first hour but was pinched in to 100 bbls. an hour. The latter topped the Dundee at 3,184 feet and was completed at 3,199 feet for an initial flow estimated at 6,000 bbls. daily. It was pinched in to 50 bbls. an hour. Both exceeded any previous completions in the field.

J. W. Leonard's No. 2 Husted, SW SW SW Section 2, Crystal Township, previously had been completed in the Dundee with an initial of about 900 bbls. at 3,180 feet, 3 feet in the sand. Because of the success of the McClanahan's No. 2 Flint, Snowden & McSweeney pulled tubing from their No. 3 Wight heirs, SE NE NE Section 10, in preparation to drill a little deeper in search of the big pay. It had been drilled to 3,192 feet and filled up several hundred feet with oil. The surface elevation of the Flint is 4 feet deeper than the Wight.

None of the 18 other active tests in Crystal Township were nearing the Dundee as the week closed, but two Ferris Township tests were expected to drill in this week. They were the Marchall Mauman and others' No. 1 G. Ries, SE NW NE Section 34, and the Burnstein Oil & Gas Co.'s No. 2 J. J. Keel, NW SE SE Section 35.

Thirteen other tests were active in Ferris Township along the northwest trend of the Crystal area. The Newark Gas & Oil Syndicate's No. 1 George Beck, NE SE NE Section 29-10n-3w, Newark Township, Gratiot County, east of the Crystal oil field, struck another light show of gas in the Monroe formation at 3,505 feet but had been drilled to 3,565 feet without commercial production. Six other Gratiot tests were active in five townships.

Thirteen other Montcalm County tests were drilling in seven townships, the nearest completion being the Gordon and Cato Oil Co.'s No. 1 Paulson, NW SW NW Section 24-12n-9w, Winfield Township, which was more than 3,200 feet deep and expected to drill into the Dundee this week.

Daily Crude Oil Co.'s No. 5 Mrs. Carey Christensen, SW NW NE Section 10-12n-6w, Home Township, made 350 bbls. daily after acid treatment in the upper Travers formation topped at 3,040 and drilled to 3,100 feet. It had an initial flow of 60 bbls. daily.

Midland County

Though there were no new completions in Midland County last week, one Porter well was increased from 80 to 700 bbls. daily by acid and several were nearing the Dundee. Acid treatment added more than 600 bbls. to the daily flow of the Pure Oil Co.'s No. 6 Younglove in Section 17-13n-1w, Porter Township, a Dundee well in which the limestone was topped at 3,367 feet.

Operators also were planning to treat the Hubbell Oil Producing Co.'s No. 1 Mary Jacobs, NW NE SE Section 9-14n-2w, Greendale Township, which was drilled into water at 3,582 feet and plugged back to 3,566. Oil was encountered at 3,552 feet.

Pure Oil Co. was nearing Dundee completion of two other tests, on the No. 1 Emma O. Reed, C S SW SW Section 1-13n-2w, Jasper Township, and the other the No. 2 Hicks, SW NW SW Section 14, Porter Township, which already had a light show of oil after topping the limestone at 3,372 feet. It was to be acid treated.

Ten other tests were active in Porter Township, one in Mount Haley, one in Jasper, and two in Greendale Townships.

Mecosta County

Another Austin Township, Mecosta County gasser was assured when the Hal-Be-Oyle & Gas Corp.'s No. 4 Taggart Brothers, Inc., C NW SE Section 3-14n-9w, developed a flow of about 2,000,000 feet daily and was still drilling. Both the No. 4 Taggart and Taggart Brothers, Inc.'s No. 1 Paul Schmidt, C SW NW Section 35-15n-Colfax Township extension test northwest of the proved Austin Pool, were expected to be completed and gauged early this week.

The Sherrit Oil & Gas Corp.'s new gasser on the James H. Scheibe lease, C SW NE Section 13-15n-7w, was gauged at 667,000 feet a day after drilling to 1,363 feet showing a reported rock pressure of 630 pounds.

Completion of several other Mecosta tests among a total of 18 active projects was delayed by various troubles with expectations of drilling into the Michigan Stray sands this week. Eight townships were represented among the tests seeking natural gas in the shallow Michigan sands.

Isabella County

One dry hole in Chippewa Township near the original Chippewa-Greendale, or Mount Pleasant Field, was offset by a 2,700,000-foot gasser completed in Vernon Township, Isabella County.

The "duster" was John F. Melvin's No. 2 Fred DeStoop, NW SE NE Section 2-14n-3w, Chippewa Township,

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which was drilled into bottom water at 3,621 feet after topping the Dundee at 3,540 feet. It will be plugged and abandoned.

W. Hunter Atha's No. 1 Timothy Regan, C NW NW Section 25-16n-4w, Vernon Township, broke a streak of bad luck when he brought in a flow of 2,700,000 feet from the Michigan Stray at a total depth of 1,507 feet, 5 feet in the shallow sands.

The Wittmer Co.'s No. 1 A. A. Curtis, C N NW SE Section 2-15n-4w, Isabella Township and County, swabbed 70 bbls. after acid treatment in the Dundee. It is 3,731 feet deep.

Twelve other tests were recorded in Denver, Isabella, Sherman and Vernon Townships, Isabella County.

Ogemaw County

Two tests which had been previously drilled into the Dundee formation were completed and placed on the pump last week in the West Branch Township, Ogemaw County Pool.

Muskegon Development Co.'s No. 1 J. Towner, NW SW NW Section 28-22n-2e, produced 85 bbls. daily after acid from a total depth of 2,704 feet. Dundee limestone had been topped at 2,535 feet.

The Weber Oil Co. also placed its No. 1 H. W. Schulty, NE NW NE Section 29, West Branch, on the pump for about 40 bbls. a day. It was completed at 2,714 feet after topping the Dundee at 2,538 feet.

Seven other tests were active in Mills, Ogemaw and West Branch Townships.

Western Michigan

An unexpected lower Traverse oil well good for 10 to 15 bbls. a day was encountered when the Lima Oil Corp. last week deepened the Continental Oil & Gas Corp.'s No. 7 Continental Motors well, a former upper Traverse oil producer, to a depth of 1,944 feet. The lower pay was topped at 1,926 feet in this old well in the southeast extension of the original Muskegon Township Field.

Reed Oil Co. failed to get a show in the upper Traverse in its No. 2 J. J. McDermott, trustee, NE SW SW Section 10-10n-16w, Muskegon Township, also a southeast extension test, and had drilled to about 1,800 feet after topping the upper Traverse at 1,639 feet. It was expected to drill into the lower Traverse this week.

Charles W. Teater, independent operator who opened the big Porter Township, Midland County pool in February, 1933, struck a 350-foot show of oil in his No. 1 Harry W. Sawyer test, NW NE SW Section 5-12n-12w, Brooks Township, Newaygo County, but also found about 50 feet of water. The test, first of several planned on a 6,000-acre block of leases in three Newaygo Townships, Brooks, Everett and Garfield—will be carried on to the lower Traverse and Dundee. It was 2,450 feet deep Saturday after striking the upper Traverse pay at 2,420 feet. Traverse lime was topped at 2,385 feet.

The Dragoon Development Co.'s No. 1 W. K. Young, SW NW NW Section 15-17n-15w, Logan Township, Mason County, is drilling on toward the Dundee after striking bottom water at 2,022 feet in the upper Traverse.

Wildcat Developments

Bottom water was encountered in the Geosyn Oil Co., Inc.'s No. 1 F. & B. Hnevsa, NE NE NW Section 34-8n-2e, a Rush Township, Shiawassee County wildcat, between 3,005 and 3,010 feet after a light show at 2,910 feet. Casing was to be pulled and hole reamed to 3,010 to continue drilling.

Black Diamond Syndicate's No. 1 Vaughn, Section 28, Lyons Township, Roscommon County, has been abandoned after acid treatment failed to develop production in the Dundee.

Gordon Oil Co.'s No. 1 Giese, SW SE NW Section 34-18n-10w, Lincoln Township, Osceola County, was nearing the Dundee at 3,400 feet and expected to complete this week.

The Marine City Gas & Oil Co.'s No. 1 Leven and Elira DeSnyder, NW NW SW Section 34-4n-16e, a southeastern Michigan test in China Township, St. Clair County, was reported shut down on top of the Dundee.

Michigan's deepest drilling wildcat, H. Snell and others' No. 1 William F. Zeeb, NW SE Section 34-2n-5e, in Genoa Township, Livingston County, had reached a depth of more than 5,000 feet with the drill on the way to the Trenton formation.

Sun Oil Co. topped the Dundee and was drilling at 3,770 feet in the No. 1 John Peterson, C SW SE Section 19-18-2w, Tobacco Township, Gladwin County. Two other Gladwin tests were drilling, one in Grant and the other in Beaverton Township.

The Peterson test is located southeast of the Whitehill-Kintner discovery well in Beaverton Township, Gladwin County. Strange Oil & Gas Co.'s No. 1 Spicer, Section 11, Beaverton, near the discovery, was reported increased to about 80 bbls. a day by acid treatment. Sun Oil Co. will abandon the No. 1 Mary Hines, Section 31, Tobacco Township, which showed only a few barrels after acidizing.

The D. A. Burris No. 1 John Becker test, C NW SE Section 35-8n-3w, Essex Township, Clinton County, had drilled to the top of the Traverse.

The newly organized Michigan Exploration Co. has started core drilling on the Frank Ferguson farm, Oneida Township, Eaton County, using a new electrical device in an attempt to locate high structures. The company's headquarters are in Lansing.

New Locations

Permits for 10 new locations in nine townships of six counties were issued by the state department of conservation from July 31 to August 7.

The first two were for Millbrook Township, Mecosta County gas tests as follows: J. P. Mikesell, trustee's No. 1 Bert and Lillian Thompson, C NW SW Section 34-13n-7w, and the Refiners Petroleum Corp.'s No. 1 Clark R. and Ina Miller, C SE SW, also Section 34. Two more were for gas tests in Belvidere Township, Montcalm County, as follows: Guy M. Obenauer's No. 1 P. Braley, C NW NW Section 4-12n-7w, and Gordon Oil Co.'s No. 1 Phillip Tracy, C SE NW Section 10. McClanahan Oil Co.'s No. 1 Martin Cole, SE SE SW Section 33-11n-5w, was the only new permit for the Crystal area in Ferris-Montcalm, while the Colmur Oil & Gas Syndicate will drill the No. 1 Bell, C NE NW Section 6-14n-8w, as a wildcat test in Morton Township, Mecosta County.

H. C. Nelson of Muskegon took out a permit for his No. 2 State of Michigan, SW SE SW Section 31-22n-3e, Churchill Township, the only new location for Ogemaw County last week.

A state permit was obtained for the National Minerals Corp.'s No. 1 Jasper Lewis, SE SE SW Section 5-10n-11w, Solon Township, Kent County.

Oklahoma Operations

By JAMES McINTYRE

CLOSE WATCH ON TWO TESTS IN SOUTHERN COAL COUNTY

Two unusually important wildcat wells in Coal County, Oklahoma, are the most closely watched of all the exploration tests being drilled in the State. These tests are on large and very promising structures, passed upon after long and careful geophysical surveys, and were started in the hope that pools ranking perhaps with the Fitts Pool in Pontotoc County could be found in Coal County. The tests might never have been started had it not been for the opening of the Fitts Pool, which lies about 16 miles distant by air line.

The Amerada Petroleum Corp. and Stanolind Oil & Gas Co.'s No. 1 Travelers Life Insurance Co., SW NW SE Section 28-1s-9e, south of the town of Olney, was reported to have had salt water at a total depth of 5,306 feet, but early this week the belief held that the water was coming from the formations in the 4,800-foot horizon, which contained asphaltic signs, and which may be Bromide sands, McLish lime was topped at 5,115 feet. There was no showing of oil as yet but the operators were far from discouraged.

The other test was not yet deep enough to show. It is Carter Oil Co.'s No. 1 Thompson, C S half NE NW Section 34-2n-9e, in the Centrahoma area, which was drilling below 4,900 feet in shale. It is 16 miles east of the Fitts Pool.

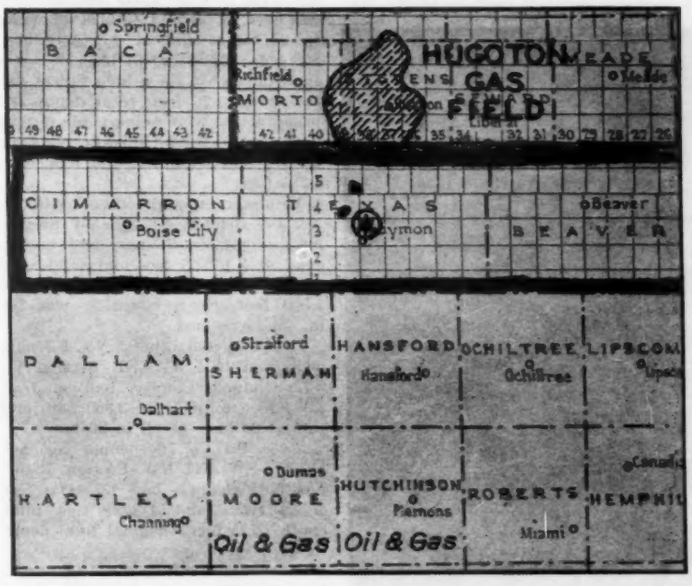
Oklahoma Production

Estimated daily average production of Oklahoma for the week ending August 10 and for the preceding week is as follows:

	Barrels	
	Aug. 10	Aug. 3
Allen	7,850	7,825
Asher-West Asher	1,200	1,275
Burbank	8,500	8,500
South Burbank	11,100	11,250
Balance Osage	26,750	27,750
Blackwell	4,750	4,775
Bristow-Slick	9,150	9,150
Chandler	4,575	4,575
Crescent	4,850	6,150
Cromwell	4,325	4,325
Cushing-Shamrock	13,500	13,500
Duncan district	4,200	4,200
Edmond	4,150	3,750
Fish	9,000	9,300
Fitts	15,025	24,450
Gray	1,275	1,675
Graham	4,250	4,250
Healdton	9,650	9,600
Hewitt	4,825	4,825
Holdenville	1,500	1,550
Keokuk	3,375	1,825
Konawa	1,725	1,800
Lucien	8,525	10,250
Marshall-Lovell	1,100	1,050
Oklahoma City	144,925	136,850
Papoose	1,200	1,200
Polo	3,000	3,325
Sasakwa and townsite	2,775	2,450
Sholem Alechem	4,025	4,025
Seminole Field:		
Bowlegs	11,600	9,450
Carr City	4,825	4,950
Earlsboro	9,825	9,775
East Earlsboro	10,425	10,350
South Earlsboro	1,100	1,175
Little River	13,750	14,900
East Little River	850	850
Maud	1,100	1,050
Mission	3,180	3,275
Seminole	12,275	11,975
East Seminole	1,425	1,450
Searight	4,300	3,725
Total Seminole	74,655	72,925
St. Louis-Pearson	23,900	24,575
Tatums	4,725	4,775
Tonkawa-Garber-Thomas	5,750	5,750
Wewoka	3,550	3,550
Yale-Jennings	5,100	5,100
Other pools	57,620	57,650
Total Oklahoma	496,370	498,775

New Panhandle Gas Field

An interesting discovery of the week was made in the Cabot Carbon Co.'s test in C NW Section 7-3n-15e (Cimmaron Meridian) in Texas County, Oklahoma Panhandle. It lies between the Hugoton gas field in southwestern Kansas and the Moore and Hutchinson oil and gas fields in the Texas Panhandle. Pipe was set at 2,490 feet and standard tools installed and a gas sand was found at 2,538-40 feet, total depth, which blew 50,000,000 feet of gas per day into the air. There was no control head at the well when it came in, but it was shut in the following day, having blown wild for 24 hours. The accompanying map shows the location of the well and previous gas discoveries in the same county.



Cabot Carbon Co. opens gas field in Texas County, Oklahoma, between Hugoton, Kansas, and Texas Panhandle Fields

Must Test Gas Wells

William J. Armstrong, conservation officer, has notified all owners of dry gas wells in the Oklahoma City Field who have not tested their wells within the past 90 days to do so without further delay, the tests to be witnessed by a representative of the conservation department. Where tests have been made operators are asked to make a report at once as to the date of test and the volume of gas produced. Unless untested wells are tested in August the conservation officer will notify gas purchasers not to buy any more gas from such wells. As potentials will be taken on the Wilcox sand wells in the Oklahoma City Field in September, Armstrong says it is advisable to get the gas wells cleaned up this month.

Osage County

Completions in Osage County in the past week included the following wells:

Enterprise Transit Co.'s No. 4, SE NW NE Section 34-26-6, Bartlesville sand at 2,868-2,919 feet, shot with 140 quarts, 295 bbls. in 24 hours.

Continental Oil Co.'s No. 8, SE NW SE Section 21-24-7, sand at 2,622-2,705 feet, shot with 140 quarts, 250 bbls. in 24 hours.

Continental Oil Co. and Gypsy Oil Co.'s No. 14, SE SW NE Section 21-24-7, Bartlesville sand at 2,627-2,700 feet, shot with 120 quarts, swabbed 55 bbls. of oil initially.

Norbla Oil Co. and others' No. 1-A, 1,020 feet north and 1,320 feet east of C Section 25-22-7, dry and abandoned at 2,932 feet.

Midco Oil Co.'s No. 4 (twin), 240 feet from south and 300 feet from east lines of SW¼ Section 24-21-8, dry and abandoned at 1,202 feet. Layton sand was penetrated at 1,120-62 feet.

Murray Ringold's No. 7-A, 865 feet north and 50 feet east of C Section 25-21-8, Layton sand at 1,105-45 feet, total depth, shot with 140 quarts, swabbed 71 bbls. in 24 hours.

Ohio Osage Oil Co.'s No. 23 (or 129), SW SE SW Section 9-21-9, an old gas well deepened from 2,215 feet, drilled to Wilcox sand at 2,565-70 feet where it had a show of oil and a hole full of water. It was abandoned, total depth 2,718 feet.

Ohio Osage Oil Co.'s No. 9, 700 feet from north and 200 feet from east lines of NW¼ Section 34-21-9, Layton sand at 1,053-62 feet, acidized and then shot with 40 quarts, 8 bbls. in 24 hours.

New work started included Sinclair Prairie Oil Co.'s No. 5, SE NW SE Section 9-25-6, digging cellar; Lewis Production Co.'s No. 7, 980 feet north and east of SW cor. Section 9-24-7, moving in material; Lewis Production Co.'s No. 10, 980 feet north and east of SW cor. NW Section 21-24-7, building rig; Peters Petroleum Corp. and Sinclair Prairie Oil Co.'s No. 9, 990 feet from north and 840 feet from west lines NE¼ Section 24-24-7, location; Higgins and others' No. 1, SW cor. Section 12-21-10, location; Harris & Haun's No. 3-A, C E half E half SE Section 18-29-12, rigged up to deepen from 2,648 feet.

Lewis Production Co. and Texas Co.'s No. 6, 980 feet north and 300 feet east of SW cor. Section 9-24-7, had Bartlesville sand at 2,659-2,702 feet and shot it with 60 quarts at 2,689-2,701 feet. It swabbed 106 bbls. of oil and 60 bbls. of water and was to be plugged back.

A production test in the Naval Reserve Field in Township 27-4, made for the purpose of finding the potential of the pool, showed an average production for four days of 10,563 bbls. per day. It made 9,899 bbls., 10,795 bbls., 10,743 bbls., and 11,535 bbls. on the four successive days. It was given an allowable of 8,050 bbls. per day in August.

Greater Seminole Area

Barnsdall Oil Co.'s No. 1 John Willmott, NE NE SW Section 15-8-5, Seminole County, is a Hunton lime completion good for 15 bbls. at 3,980-98 feet, shot twice and acidized twice. It swabbed 182 bbls. gross in 24 hours after one acid treatment.

Tom Phillips and others' No. 1 Abbott, NE cor. Section 33-8-7, Seminole County, a wildcat, pumped 60 bbls. in 24 hours from Booch sand at 3,140-80 feet. It had been drilled to Wilcox sand at 4,339-51 feet which was dry, and the hole was plugged back to 3,198 feet. It was completed.

Elliott and Shell Petroleum Corp. completed No. 7 Pickens, NW NW NE Section 15-7-8, Hughes County. It had Booch sand at 2,886-2,985 feet, total depth 2,985 feet, and flowed 116 bbls. in 48 hours.

Mid-Continent Petroleum Corp.'s No. 3 Gassoway, SW SE NE Section 14-6-5, made a potential production of 423 bbls. of oil from Simpson Dolomite at 3,771-3,816 feet. It also produced about 125 bbls. of water.

Mudge Oil Co.'s No. 2 Heard, 220 feet north and 330 feet west of C

Section 9-6-7, was drilled to Wapanucka lime at 2,903 feet, total depth 2,967 feet. It was dry and the hole plugged back to 1,930 feet and pipe rigged at 1,920-30 feet. It made a 35-bbl. pumper.

Carter Oil Co. and others made a location for No. 4 Keokuk C-28, C S half SW NE Section 2-10-6, Seminole County, a 4,200-foot Misener sand test. Wood Oil Co. was building rig for No. 1-A James, C W half NE SE Section 24-9-6, Seminole County. Olympic Oil Co. was rigging up rotary for No. 1 Dixon-B, NW SE NW Section 12-9-8, Seminole County. Empire Oil & Refining Co. had rig corners in for No. 4 Davis-B, 273 feet from south and 307 feet from east lines of NE Section 30-7-8, Seminole County. V. A. Harden made a location for No. 1-A Irving, SE SE SE Section 23-7-9, Hughes County, a 500-foot test. O'Mara and others were drilling at 1,500 feet in No. 1 Bowlby, NW SW SE Section 24-6-3, Pottawatomie County. Mudge Oil Co. spudded No. 3 Heard, SW SE NW Section 9-6-7, Seminole County. Harmon Oil Co. was rigging up machine for No. 1 Murphy, 320 feet north and 200 feet east of SW cor. Section 8-6-8, Hughes County. Sunray Oil Co.'s No. 17 McCall, SE NE NW Section 17-5-8, in the Allen Pool, was plugged back to 2,579 feet, the pipe ripped at 2,275-2,314 feet and shot with 10 quarts at 2,285-2,305 feet. It swabbed 24 bbls. in 24 hours and was to be shot again. Old total depth was 2,620 feet. Same company's No. 18 McCall, 450 feet west and 180 feet south of NE cor. Section 17-5-8, was drilling at 400 feet. M. F. Delaney was drilling at 690 feet in No. 1 Crumley, 810 feet north and 265 feet west of C Section 22-5-8. Morris & Wilson drilled sand at 873-85 feet, total depth, in No. 2 McElroy, 890 feet east and 990 feet north of C Section 22-5-8, and the well was shut down. Sunray Oil Co. was building rig for No. 40 Harjo, NW NE SW Section 26-5-8, for a 3,500-foot test. Great Lakes Oil and others were rigging up machine for No. 4 Gilmore, 1,120 feet north and 660 feet east of C Section 29-5-8.

Indian Territory Illuminating Oil Co.'s No. 1 Church, SW NW NW Section 13-6-5, Seminole County, which had dolomite at 3,775 feet and drilled to 3,855 feet, was treated with acid after it showed 25 bbls. of oil on the swab in 15 hours, but when opened would not flow and was being put on the pump.

Paul Traugh's wildcat, No. 1-A Lowry, NE SE NE Section 30-6-5, Pottawatomie County, was given a pumping test and made 55 bbls. in eight hours from Wewoka sand at 2,446-61 feet.

Atlantic Oil Co.'s No. 1 Patterson, SW SW NE Section 8-6-7, flowed 265 bbls. in 16 hours from Wilcox sand at 3,949-65 feet and was drilling at 4,016 feet in green shale and dolomite.

Mid-Continent Petroleum Corp.'s No. 5 Harjoche, SE SW SE Section 31-7-8, swabbed 316 bbls. of oil in 24 hours from Wilcox sand at 4,273-77 feet, total depth, and was to be tested in Viola and dolomite topped at 4,128 and 4,240 feet, respectively.

Stanolind Oil & Gas Co.'s No. 2 Starkey-B, NW NW SE Section 31-7-8, Fish Pool, at 4,303 feet, swabbed 315 bbls. of oil and 43 bbls. of water in 24 hours and at 4,305 swabbed 238 bbls. of oil and 37 bbls. of water in 18 hours. It got a hole full of water at 4,323-26 feet, total depth and preparations were being made to plug back. It had been drilled deeper from 4,214 feet to Wilcox sand topped at 4,286 feet.

Vandeventer and others' wildcat, No. 1-A Bender, NE NE SW Section 3-8-8, Seminole County, had broken sand at 3,162-68 feet and solid sand 3,168-72 feet. Oil rose in the hole 1,500 feet. Six-inch casing was being underreamed.

Campbell and others' No. 1 Knappenburger, SE NW NE Section 17-9-7, Seminole County, had sand at 3,385 feet, total depth 3,385 feet, and flowed 20 bbls. of oil in 20 hours.

Potco Oil Co., deepening No. 1-A Dixon, SW NE NW Section 12-9-8, Seminole County, had 4,000,000 feet of gas from sand at 1,698 feet, total depth 1,725 feet. Original total depth was 1,490 feet.

Shepard and others' No. 1 Oliphant, NE NE SW Section 12-9-8, swabbed 35 bbls. in 24 hours from sand at 1,710-33 feet, total depth 1,748 feet.

In the Keokuk area, Carter Oil Co. and others' No. 4 Canard, C N half SW SE Section 35-11-6, had Hunton lime at 4,065-73 feet, total depth, and swabbed 175 bbls. of oil in 14 hours and then while tubing was being run flowed 220 bbls. Carter Oil Co. and others' No. 2 Stake, C N half NE SW Section 35-11-6, had Misener at 4,116 feet, total depth 4,158 feet. It was plugged back to 4,098 feet and the plug drilled out and the well tested. It pumped 75 bbls. of oil and 25 bbls. of water in 11 hours.

Pontotoc County

Sonora Oil Co.'s No. 1 McElroy, NE SW NE Section 22-5-8, Pontotoc County, was a hole full of water at 904 feet and was abandoned. McKibbi's No. 1 Reeves, NW SW SE Section 24-4-7, was abandoned, having had a hole full of water from sand at 1,737-1,802 feet, total depth.

In the Fitts Pool

In the Fitts Pool, southern Pontotoc County, the following completions were recorded in the past week:

Moore and others' No. 1-A Harper, 405 feet north and 330 feet east of C Section 29-2-7, had Bromide at 4,035 feet, sands at 4,135 feet and 4,235 feet, McLish at 4,245-81 feet, total depth. It flowed 210 bbls. in one hour and was given a potential of 1,741 bbls. per day.

Carter Oil Co.'s No. 17 C. L. Richards, NW SE SE Section 30-2-7, found Bromide at 3,905 feet; sands at 3,985 and 4,090 feet, McLish at 4,115-21 feet, total depth. It flowed 736 bbls. in three hours through casing with gas at the rate of 30,000,000 feet.

Carter Oil Co.'s No. 2 Julia Smith had Bromide sand at 3,845 feet, sands at 3,940 and 3,985 feet, McLish at 4,005-57 feet, total depth. The well flowed 351 bbls. in two hours through casing.

Near Completions

Stanolind Oil & Gas Co.'s No. 2 Norris, SE SW SE Section 25-2-6, an old well plugged back from 4,315 feet to 4,258 feet, flowed 516 bbls. in 21 hours and again 300 bbls. in 24 hours, both through tubing.

Burke-Greis Oil Co.'s No. 2 Chambers, NW NE NW Section 36-2-6, had Bromide at 4,255 feet and first sand at 4,355 feet, total depth 4,393.

It flowed 977 bbls. through tubing in 24 hours. It was deepened to sand at 4,412-19 feet, total depth, and flowed 120 bbls. of oil and 70 bbls. of water per hour with the tools in the hole.

Moore and others' No. 7 Akers, SW NW NE Section 36-2-6, had Bromide at 4,332 feet, sands at 4,435 and 4,520 feet, total depth 4,530 feet. At 4,282 feet it flowed 3 bbls. per hour, at 4,335 feet, 13 bbls. per hour, at 4,470 feet, 27 bbls. per hour. From 4,520 to 4,530 feet water broke in and filled the hole. Preparations for plugging back were being made.

Moore and others' No. 1 Witherspoon, NW SE NW Section 31-2-7, had Bromide at 4,105 feet, sands at 4,195 and 4,255 feet, McLish at 4,362 feet, total depth 4,505 feet. While drilling from 4,137 feet to the bottom it averaged about 10 bbls. of oil per hour, which is small pickings in the Fitts Pool.

Moore and others' No. 3 Atkins, SW NW NW Section 32-2-7, had basal McLish sand at 4,405 feet. At 4,425 feet it flowed 482 bbls. in one hour. At 4,475 feet it flowed 809 bbls. in one hour with a 200-pound back pressure. Later it flowed 236 bbls. in 15 minutes. The crew was waiting for orders.

Moore and others' No. 1 Benton, NW NE NW Section 32-2-7, had Bromide at 3,795 feet, sands at 3,855 and 3,900 feet, total depth 4,025 feet. It flowed 1,574 bbls. in seven hours with gas at the rate of 25,000,000 feet.

Noble County

In the Billings Pool where deep sand production was recently found in Midco Oil Corp.'s No. 1-A Yost. The Midco company's No. 1-A Neil, 400 feet from south and 800 feet from west lines of SE¼ Section 15-23-2w, and a north offset to No. 1-A Yost, found the base of the Pennsylvanian at 4,095 feet and rigged up standard tools.

Phillips Petroleum Co.'s No. 1-A T. P. O'Neil, SE cor. Section 16-23-2w, had the base of the Pennsylvanian at 4,225 feet and cored sand at 4,232-34 feet. Midco Oil Co.'s No. 1-A Yost, 800 feet from west and 400 feet from north lines of NE¼ Section 22-23-2w, was given a pumping test and produced 50 bbls. of oil and 75 bbls. of water. This well has been in since early in June but is not yet a

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completion. Total depth is 4,257 feet.

In the Polo Pool, Noble County, Stanolind Oil & Gas Co.'s No. 5 DeBord-B, SW cor. Section 27-22-2w, was acidized in dolomite at 4,798-4,848 feet and later swabbed 30 bbls. of oil per hour.

Stanolind Oil & Gas Co. and others' No. 1 Shoop, NW SW SE Section 27-22-2w, which was a hole full of water at 4,955-60 feet and was plugged back to 4,930 feet, was acidized and shut in. A few days later it was opened and the hole was filled 2,400 feet with water and 100 feet of oil. It was shut down.

Several wells are in the sand in the Lucien Pool and one, Twin States Oil Co.'s No. 1 Pfeiffer, 385 feet south and 660 feet west of C Section 33-20-2w, was given a 4,000-gallon acid treatment and was shut in for several days. When opened it flowed 80 bbls. the first hour. It has first Wilcox sand at 4,907-53 feet, total depth 5,095 feet. This well has been in since June but not yet completed.

Phillips Petroleum Co.'s No. 1 Love, C NE NW Section 3-19-2w, in the southern end of the Lucien Pool, but in Noble County, was acidized in Viola lime at 4,912-52 feet and proved good for 285 bbls. a day from that formation. Drilling was resumed and it was in dolomite at 4,973-81 feet, total depth when last visited.

Logan County

In the Crescent Pool, Logan County, Gypsy Oil Co. and Carter Oil Co.'s No. 3 Knowles, an old well drilled deeper from 6,220 feet to 6,337 feet, 4 feet in second Wilcox sand, increased its production from 250 bbls. to 1,325 bbls. a day, last June, but water began to intrude lowering the production and cutting the oil. It was finally plugged back to 6,230 feet and deepened to 6,269 feet. On a potential test the well flowed 157 bbls. per day through 2½-inch tubing lowered to 6,250 feet.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. have cellar dug and material moving in for No. 1 Lee, C NW NW Section 3-19-2w, Logan County, and have made location for No. 1 Short, C NW NE Section 30-19-2w, both in the southern end of the Lucien Pool.

Oklahoma County

In the Edmond Pool in Oklahoma County, Marathon Oil Co.'s No. 6 Dahl, SE SW SE Section 31-14-3w, was completed. It had first Wilcox sand at 6,515 feet and second Wilcox at 6,610 feet, total depth 6,703 feet. It flowed a potential production of 534 bbls. in four hours, with gas at the rate of 23,400,000 feet.

In the Oklahoma City Pool, Westgate Oil Co.'s No. 9 Carey, 172 feet from north and 621 feet from east lines of SE¼ Section 34-12-3w, was completed at a total depth of 6,401 feet. It flowed a potential production of 1,034 bbls. in four hours from Wilcox sand topped at 6,276 feet and drilled to 6,401 feet, total depth. It also produced gas at the rate of 27,000,000 feet per day.

Marathon Oil Co. made location for No. 7 Dahl, SE NW SE Section 31-14-3w, Edmond Pool. Cellars were dug for Phillips Petroleum Co.'s No. 2 Troy, NW cor. SW SW NE Section 26-12-3w, in the Oklahoma City Pool; British-American Oil Co.'s No. 1 Beauty Parlor, 65 feet south and 347 feet west of C Section 34-12-3w; Erie Oil Co.'s No. 1 Bryant School, 51 feet west and 419 feet south of C Section 34-12-3w; Phillips Petroleum Co.'s No. 1 Etta, NE cor. SW NE Section 34-12-3w, and Westgate Oil Co.'s No. 11 Carey, 172 feet south and 1,137 feet east of C Section 34-12-3w. Last named company has rig up for No. 12 Carey, 172 feet south and 677 feet east of C Section 34-12-3w.

Johnston & Kemnitz' extension well in the Edmond Pool, No. 1 Price, SW SE NW Section 30-14-3w, flowed 865 bbls. from 4:50 p.m. to 7:15 a.m. and on a subsequent test flowed 210 bbls. in 25 minutes and on the next head 63 bbls. in 15 minutes.

Pawnee County

J. L. Donahoe has rotary rig up for No. 2 Walker, C NE SW SW Section 22-23-4, Pawnee County.

Washita County

Oklahoma Midwestern Oil Co.'s wildcat test in Washita County, No. 1 Dock, SW SW SW Section 21-8-18w, was shut down with hole full of water from sand at 2,710-17 feet. It had granite wash and dolomite at 2,640-2,710 feet.

Grant County

Helmerich & Payne's wildcat test in western Grant County, No. 1 Crouse, C NE SW Section 29-25-8w, has been drilled to contract depth and was shut down at 6,502 feet for orders. It had Oswego at 5,480 feet, Cherokee at 5,561 feet, Mississippi lime at 5,805 feet. It topped Misener sand at 6,431 feet and topped Sylvan at 6,446 feet.

Alfalfa County

Tex-O-Kan Oil Co.'s No. 1 Acre, C SW NE Section 14-24-11w, in Alfalfa County, is again active. This test showed production at 6,255 feet and drilled to 6,460 feet. The crew had a fishing job and finally cemented off the tools, plugging back with 225 sacks of cement. Lack of drilling water is delaying the deep drilling of the operation.

Tulsa District Completions

Elm Oil Co.'s No. 32 Manual, C N half NW NE Section 4-18-7, Creek County, sand at 2,548-80 feet, 25 bbls. of oil and 45 bbls. of water.

O. O. Owens' No. 13 Riverbed, NW SW SW Section 17-18-7, pay topped at 2,934 feet, acidized, made 65 bbls. of oil and 200 bbls. of water.

J. Fultz' No. 1-A Newson, SW SW NW Section 16-14-17, Muskogee County, sand 1,900-09, 20 bbls. initially.

N. Basinger and others' No. 2 DePriest, CEL NE NE Section 35-17-12, Tulsa County, Wilcox sand at 2,310-28 feet, 30 bbls. initially.

Southern Fields

Karchner & Smith completed No. 3 Lynn, SW SE NE NE Section 31-1s-2w, Carter County, a 20-bbl. well from a sand series from 1,385 to 2,026 feet.

Shasta Oil Co.'s No. 18 Patterson, C SE NW Section 1-2s-10w, Cotton County, was a 5-bbl. completion at 2,210-20 feet. Same company's No. 19 Patterson, 1,000 feet north and west of C Section 1-2s-10w, is a 30-bbl. well completed at 2,205-19 feet.

T. H. McCasland's No. 1-A Dare, SW NE SE Section 2-2s-8w, Stephens County, was dry and abandoned at 2,250 feet. It had a sand at 2,028-34 feet with a showing of oil.

Bridwell Oil & Gas Co.'s No. 2 Nigh, NE cor. SE SW Section 11-2s-8w, Stephens County, is a 2,000,000-foot gasser spraying 10 bbls. of oil. It had gas sand at 1,999-2,013 feet and 2,018-2,026 feet. It was shut in and completed.

George Pace and others' No. 2 Watkins-D, SE cor. SW SW NW Section 22-2s-7w, dry and abandoned at 1,835 feet.

Skelly Oil Co. abandoned No. 3 Brooks, NE NE SE Section 17-2s-2w, Carter County. It was dry at 2,269 feet. It had sands from 1,636 to 2,028 feet, some of them showing saturation.

E. B. Abernathy's No. 1 Christian, 400 feet north and 1,245 feet west of SE cor. Section 1-6s-19e, Choctaw County, was dry and abandoned at 585 feet. It had Arbuckle sand at 494-502 feet and a hard sand at 577-82 feet.

Gypsy Oil Co.'s No. 1 Southall, SW cor. Section 2-1-20w, in the Altus Pool, Jackson County, had granite wash at 1,550-62 feet, total depth 1,637 feet. It swabbed 44½ bbls. in 12 hours. Same company's No. 10 Kelly, SE NE NE Section 10-1-20w, swabbed and flowed 83 bbls. in 24 hours from granite wash at 1,405-47 feet. It had not been completed.

King & Hutchinson set 60 feet of 8¼-inch casing in their wildcat test in Harmon County, No. 1 W. L. Hollis, NW cor. SW Section 20-3-25w. Manson has made a location for No. 2 Minor-A, NE NE NE Section 15-1n-20w, Jackson County. Sinclair Prairie's No. 28 Millin and Thomas, 335 feet north and 845 feet west of SE cor. Section 5-4s-3w, Carter County, was drilling at 680 feet. E. B. Abernathy has started drilling No. 2 Christian, 100 feet south and 1,245 feet west of NE cor. Section 12-6s-19, Choctaw County. Kingston Oil & Gas Co.'s No. 1 G. M. Felts, NE cor. NW Section 6-8s-6e, Marshall County, was drilling at 200 feet.

George Prussing, of the Union Oil Co., and chairman of the American Petroleum Institute's Fire Prevention Committee, Production Division, has been appointed chairman of a new fire prevention committee of the Los Angeles Chamber of Commerce.

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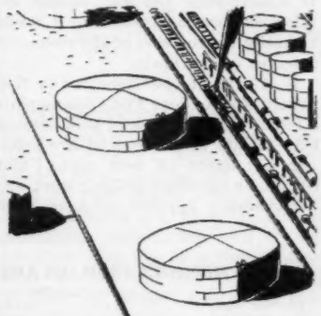

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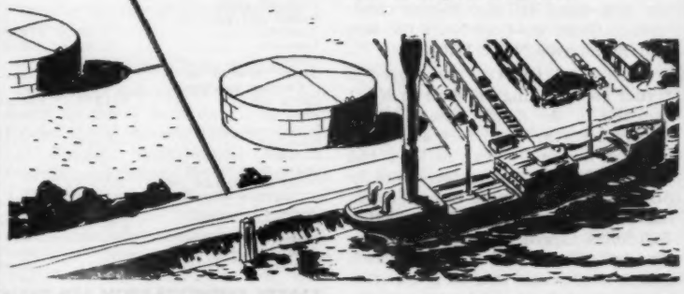

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California Field Report

By
L. P. STOCKMAN

GOOD LOOKING OIL SAND IN SOUTH DOME OF KETTLEMAN

LOS ANGELES, Calif., Aug. 12.—Development work in California was features by the completion of another large group of new wells and the coring of an oil sand in the South Dome of Kettleman Hills by Continental Oil Co. Based on the drilling under way and the necessity of operators to maintain aggressive development if they desire to show sustained production or increase their potential we may anticipate a large amount of work during the remainder of the year. Every indication points to the continuance of aggressive drilling especially at Semi-Tropic where operators are developing commercial gas production which may become an important factor later this year when the winter demand for natural gas increases. Several wells in the Semi-Tropic gas field were placed on production early this week in order that operators might be able to get some tangible evidence to justify the extension of gas transmission lines into the area. These wells will be kept on production for a month and if the field comes up to expectations we may anticipate aggressive drilling.

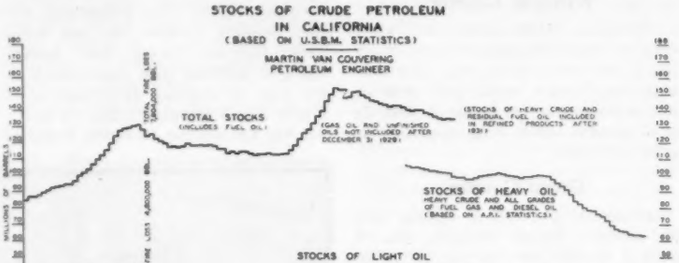
Mountain View took a new lease on life this week when operators staked location for six new wells and began rigging up rotary drilling equipment in four others. New locations made include Shell's No. 2 Bahrenburg and No. 2 Porter in Section 32-30-29, Standard's No. 6 Ranton, and Nos. 7 and 8 on the Wible lease and Union Oil Co.'s No. 2-B on the Kern County Land Co. lease. Wells rigging up include Dana Hogan's No. 1 Foster, National Oil Co.'s No. 2 and Mohawk Petroleum Co.'s No. 6 Clendennen and No. 7 Hood. All of these wells should be under way shortly as plans call for immediate drilling. Recent spuds include Canal Oil Co.'s No. 1 Bloomer and Standard's No. 1 Wilson.

Continental Oil Co. has logged a rather good looking oil sand in No. 1 Gatchell in the South Dome of Kettleman Hills at 7,415 feet and preparations are under way to land and cement 6⅝-inch casing for an early production. The top of the oil showings in this well, located in Section 7-25-20, is logged at 7,325 feet. Continental Oil Co. will have to watch a high head water zone as it was this troublesome factor that turned the Ohio's promising test in the South Dome into a water well flowing 50,000 bbls. of hot salt water per day a few years ago. The significance that attaches to the discovery of the Continental does not lie merely in the fact that the company has discovered a possibly productive zone in the South Dome because other companies have also found this zone but its real value lies in the possibility it may have discovered a commercially productive zone. This will not be definitely determined until the well is given a production test. There are three distinct domes in the Kettleman Hills district and while the South Dome does not have complete closure there is a good chance it may prove productive. The North Dome and the Middle Dome are already proved but the South Dome remains unsolved despite the fact Ohio's exploratory well looked rather good before it was turned loose and showed salt water. If Continental Oil Co. should develop commercial production it would necessitate a revision of the estimated reserves of the State.

It is evident operators in the Kettleman North Dome Field contemplate a consistent development plan because both Kenda and Standard are erecting a number of new rigs. Union Oil Co. by excellent drilling work and perseverance appears to have overcome the mechanical trouble that has proved so costly in No. 1 Lillis-Welsh and within another few months we may have some idea regarding the potentiality of the possible deep zone discovered in this well by Ed McAdams. Union took this project over from McAdams after a premature explosion of a shot had wrecked the pipe. The original hole is down 10,944 feet but this does not mean much as the Union is drilling an entire new hole as the junk in the old hole practically precludes its use. The company recently landed and cemented 9,081 feet of 8⅝-inch casing and in doing so definitely cased off the fish which is behind this job. From now on it will be a case of drilling down to about 11,000 feet where production is anticipated.

Union established a remarkable record in landing the new string of pipe in No. 1 Lillis-Welsh because 24 hours after the reamer had made its last cut in the bottom of the hole, the entire 9,081 feet of pipe was in the hole waiting for the cement crew. During this 24-hour period the crew pulled out the drill pipe and reamer and ran in the casing. It was floated in and no trouble was encountered at any time. The Kettleman North Dome completed No. 8-20-J early this week and this new well was brought in flowing 5,125 bbls. of 35.1 gravity oil and 4,860,000 feet of gas per day from 8,615 feet after the hole had been plugged back from 8,661 feet. Kenda and Standard should each complete about four new wells within 30 days. Two of these potential producers will be tanking oil within another 10 or 15 days. In the Middle Dome of Kettleman Hills, Standard picked up the top of the Temblor at 7,610 feet and this well should be ready for a test within another six weeks.

Amerada Petroleum Corp. and Republic Petroleum Co. are working on two wildcats that took on a much improved look this week and these tests should be watched during the next fortnight. The former's well is near Tracy in San Joaquin County in the northern part of the State. No oil has been found in this well but indications of a substantial accumulation of gas have been very definite. A day or so ago a preliminary test showed a flow of gas estimated at 15,000,000 feet. Because of its proximity to the San Francisco Bay region it will find a ready market. Natural gas now being used in Oakland and San Francisco is being moved north from the San Joaquin Valley, 200 miles to the south. Republic Petroleum's wildcat is in the El Segundo area of Los Angeles Basin and looks very promising. Definite oil showings have been cored and a conglomerate similar to that found in the Playa Del Rey Field is present. This well looks unusually promising and it may result in the discovery of another oil field.



Montebello

The eastern extension of the Montebello Field is still somewhat of an enigma and correlation work is out of the question because everything from a structural standpoint is haywire from every angle. This area looked rather hot when Universal Consolidated Oil Co. finished No. 2 Nutt but at present it looks very disappointing. Union, Standard, Shell and Associated had a chance to go into the area in a big way but the geological departments of each turned down the proposition because they were shooting in the dark as there is no evidence of structure visible upon which one can base an opinion justifying drilling.

The Montebello extension is any-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 28		July 21			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Fuel oil	.....	.....	.....	.....	.....	8,614,310
Diesel and gas oil	.....	.....	.....	.....	527,098	1,000,056
Gasoline	353,425	50,489	76,983	10,998	4,593,133	4,387,812
Kerosene	84,106	12,015	.....	.....	753,467	648,080
Asphalt	.....	.....	.....	.....	.....	70,019
Other finished oil	.....	.....	.....	.....	.....	54,778
Foreign exports—						
Crude oil	941,191	134,456	364,251	52,036	7,552,077	4,508,905
Fuel oil	60,217	8,602	221,728	31,675	7,311,018	7,167,792
Diesel and gas oil	46,668	6,667	86,193	12,313	2,641,016	2,585,917
Gasoline	66,974	9,568	.....	.....	3,461,137	2,428,969
Kerosene	.....	.....	.....	.....	813,478	1,168,991
Other finished oil	.....	.....	.....	.....	.....	3,529
Other unfinished oil	.....	.....	30,485	4,355	99,847	186,069
Coastwise-domestic—						
Crude oil	.....	.....	125,403	17,915	3,245,561	4,987,601
Fuel oil	246,737	35,248	103,426	14,775	5,546,836	5,295,689
Diesel and gas oil	45,429	6,491	16,631	2,376	585,451	423,041
Gasoline	409,249	58,464	280,956	40,137	6,300,633	6,679,048
Kerosene	44,840	6,406	.....	.....	121,980	94,248

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	.....	110,650
Diesel and gas oil	.....	.....	.....	.....	157,258	448,113
Gasoline	.....	.....	.....	.....	.....	145,806
Kerosene	.....	.....	.....	.....	149,715	276,412
Asphalt	.....	.....	67,215	9,602	348,064	.....
Lubricants	.....	.....	5,951	850	35,172	26,500
Foreign exports—						
Crude oil	.....	.....	.....	.....	1,426,499	1,005,072
Fuel oil	28,761	4,109	102,839	14,834	1,233,982	1,092,713
Diesel and gas oil	.....	.....	101,261	14,466	731,609	818,270
Gasoline	.....	.....	73,918	10,560	1,672,949	1,879,042
Kerosene	.....	.....	14,772	2,110	483,712	510,089
Lubricants	.....	.....	4,615	659	136,399	89,744
Other finished oil	.....	.....	.....	.....	.....	2,760
Other unfinished oil	.....	.....	.....	.....	.....	5,750
Coastwise-domestic—						
Fuel oil	292,207	41,744	147,580	21,081	3,781,174	3,107,720
Diesel and gas oil	.....	.....	.....	.....	141,667	100,129
Gasoline	36,140	4,306	.....	.....	2,730,142	2,450,542
Kerosene	2,387	484	.....	.....	64,034	57,464

one's guess. Geologically and structurally there is no reason for either a new field or an extension of the older field and yet two wells have shown evidence of an accumulation. These wells indicate one or two problems are still unanswered. Universal Consolidated Oil Co.'s No. 2 Nutt is in the extreme eastern end of the Montebello Field and yet other tests drilled higher structurally in the Montebello Field failed to find any indication of the Universal zone. This limits the trend in one direction. A few hundred feet east, Texas Co. has drilled a test that does not look any too hot as it is already several hundred feet deeper than Universal Consolidated's producing well. This test seems to indicate the field does not extend eastward. It also indicates a possibility the area is badly faulted and may not contain a uniform productive horizon.

Outpost

In the extreme eastern end of the Montebello extension, Woodward Oil Co. has completed its No. 1 Lapworth pumping 240 bbls. of 28.5 gravity oil per day from the Miocene or possibly the transition zone between the Pliocene and Miocene. This hole was bottomed at 3,220 feet but has been plugged back to 3,167 feet because of water trouble. The well is still showing a rather high water content but it is fresh and separates readily. This well has further complicated the problem because we find one well in the east and another in the west end of the extension both producing and a deep hole in between. The only explanation will be found as a result of additional drilling. Texas Co. found approximately 1,500 feet of conglomerate in its well located between the two outposts but neither of the two producing wells logged any similar formation.

General Petroleum completed No. 2 Knapp in the Edison Field of Kern County, pumping 351 bbls. of 15.3 gravity per day. This well drilled into granite at 1,523 feet the top of which was found at 1,150 feet. The well was finished with a 6⅝-inch liner carrying 374 feet of perforated. The A. T. Jergins Trust found granite in No. 2 Ross at 1,192 feet and after drilling ahead to 1,239 feet abandoned the hole. Union Oil Co. will soon start its first drilling in this field as locations were staked a week or so ago for No. 1 Brockman and No. 1 Daugherty, both in Section 13-30-29.

Dominguez

Shell completed two new wells in the Dominguez Field this week and should have another tanking oil within a few days. The new wells were Nos. 75 and 76 on the Reyes lease, the former being good for 465 bbls. of 32.8 gravity oil and 1,150,000 feet of natural gas per day and the latter 1,780 bbls. of 32.6 gravity oil and 2,000,000 feet of natural gas per day. No. 75 Reyes was bottomed at 4,584 feet but was plugged back to 4,507 feet while No. 76 was finished at 4,554 feet. In the West Coyote Field, the Standard recompleted No. 59 Emery doing 554 bbls. of clean 30.5 gravity oil per day on a compressor after the hole has been plugged back from 5,904 feet to 5,725 feet.

Union Oil Co. added another new producer to its list in the Playa Del Rey Field by finishing No. 11 Vidor flowing 802 bbls. of clean 22.4 gravity oil and 2,000,000 feet of gas per day from 6,306 feet. No. 10 Del Rey completed in the upper zone at 3,652 feet is being rigged up to pump. Continental Oil Co.'s No. 36 Bixby in the Seal Beach Field has failed to show commercial production at 6,260 feet after the hole had been plugged back from 6,457 feet as the output, 145 bbls. per day on a compressor, is cutting 70 per cent.

Long Beach

Twentieth Century Oil Co. finished an exceptionally good well in the Long Beach Field this week when No. 2 Signal was brought in flowing 1,100 bbls. of 26.8 gravity and 1,180,000 feet of gas per day from 3,768 feet. This is the best completion listed in the Long Beach Field in several months and will stimulate drilling in the vicinity of Twenty-first and Juniper Streets where it is located. Preparations are under way to start 12 new wells within 15 days. An agreement has been reached between the Sunnyside Cemetery at Long Beach and Italo Petroleum whereby the latter will be permitted to whipstock a series of wells beneath the property of the cemetery association. This work should prove remunerative to both as the cemetery is rather large and should afford good drainage area. Several suits filed against other oil companies for drilling beneath the cemetery property are pending and will be prosecuted according to attorneys for the cemetery association and a demand made for an accounting of all oil and gas produced.

Standard Oil Co., acting as agent for Shell and K. & I. Corp., finished its first well under this agreement in the Inglewood Field when No. 19 Rubel was brought in flowing 2,465 bbls. of clean 22.5 gravity oil per day from 3,301 feet after the hole had been finished with a 6⅝-inch liner including 785 feet of perforated. Shell and K. & I. Corp. secured this property as the result of a deal with Pacific Western whereby the latter sold its holdings at Kettleman Hills and Inglewood for approximately $12,000,000. Shell bought one-half and the K. & I. Corp. purchased the other half. K. & I. Corp. is owned equally by Standard Oil Co. and Honolulu Oil Corp. Lucky Strike Oil Co.'s No. 4 Huntington in the Huntington Beach Field was finished early this week and proved good for 160 bbls. of 24.3 gravity per day at 3,957 feet.

Kern River

Two new wells were finished out in the Kern Front area of the Kern River Field this week and both registered commercial production. Kern River Oilfields finished No. 3 in Section 25-28-27, and this new producer was good for 398 bbls. of 15.9 gravity oil per day from 2,105 feet. Chanslor-Canfield-Midway Oil Co., operating company for the Santa Fe Railroad, brought in No. 45 in Section 23-28-27, pumping 201 bbls. of 14.3 gravity oil per day from 2,117 feet after the hole had been finished with an 8⅝-inch liner carrying 251 feet of perforated. Wells in this section are usually completed in about 15 days and the development cost is relatively low. Republic Petroleum Co. set a drilling record this week by drilling 1,924 feet of hole, coring from 1,800 feet and setting 1,829 feet of 10¾-inch casing in less than six days.

In the Mount Poso Field, Union Oil Co. has finished No. 26 S. & M. pumping 701 bbls. of 16.8 gravity per day from 1,845 feet after the hole had been finished with a 6⅝-inch liner including 45 feet of perforated. Shell's No. 4 Mathews in the same field was good for 696 bbls. of 16.5 gravity oil per day from 1,734 feet on the beam. In the Semi-Tropic gas field of Kern County, Fullerton Oil Co. completed No. 32 in Section 26-27-23, with an initial of 22,400,000 feet of gas per day from 2,431 feet. Standard's No. 1 W. G. O. was only good for 5,000,000 feet per day upon completion at 2,361 feet. Superior Oil Co.'s No. 1 Bradford, however, registered an initial daily production of 26,000,000 feet of gas upon completion at 2,418 feet. Western Gulf Oil Co.'s No. 1 Holderman, a new well in the Fruitvale Field of Kern County, proved to be an excellent producer upon completion at 3,950 feet after the hole had been finished with a 6⅝-inch liner carrying 197 feet of perforated. It showed an initial daily production of 775 bbls. of clean 22.8 gravity oil.

Ventura Avenue

Completions in the Ventura Avenue Field this week were satisfactory from a production standpoint but were characterized by high water cuts. This was especially true of two new wells finished in the deep 57 zone. Associated's No. 131 Lloyd, bottomed at 9,846 feet, was brought in flowing 3,251 bbls. of 33.1 gravity oil cutting 50 per cent. General Petroleum's No. 13 Notten which was finished at 9,510 feet came in flowing 1,200 bbls. per day showing a cut of about 15 per cent. The cut in the latter well may be due to the fact that the water string froze at 8,455 feet and since it could not be pulled out it was cemented at that point. It had been the intention to set it a little deeper. No. 49 Lloyd of the Associated, finished in the upper zone at 4,208 feet, was completed flowing 406 bbls. of 27.6 gravity oil per day with a water cut 34 per cent.

Completion of Anacapa Oil Co.'s No. 2 Low broke the monotony in the Santa Barbara Mesa Field this week because as a result of decreased drilling completions have been few and far between and operators have settled back to the production stage. No. 2 Low was bottomed at 2,011 feet and brought in barefoot pumping 240 bbls. of fairly clean 18.1 gravity oil per day. In the Piru district of Ventura County, Bolsa Chica Oil Co. recompleted No. 2 Snow in Section 4-4-18, pumping 361 bbls. of 24.5 gravity oil per day after the hole had been cleaned out to bottom 3,094 feet. Pacific Western also chalked up a recompletion in this field when No. 2 Temescal was returned to production pumping 330 bbls. of 22.3 gravity oil per day from 2,162 feet.

Completions and Operations in New York-Pennsylvania Gas Field

By R. C. CONINE

COUDERSPORT, Pa., Aug. 12.—One of the largest gassers in the north central Pennsylvania gas belt marked operations in that area in the past week. This was Williamsport Natural Gas Co.'s Hile-Ellis-Cobb No. 1, Genesee Township, Potter County, Pennsylvania, which came in for 31,000,000 feet a day. The well was completed at a total depth of 5,021 feet. The top of the Oriskany sand was found at 5,004 feet and first gas showed at 5,013 feet.

Cunningham Natural Gas Co. completed a good well in New York State, and while the daily gauge is not known, the initial rock pressure was tested at 1,990 pounds. This was the Colligan farm test which was completed at a total depth of 4,614 feet, Alma Township, Allegany County. The Tully sand was reached at 3,991-4,047 feet, the Lime at 4,582 feet, and the top of the Oriskany at 4,609 feet. First gas was at 4,612 feet.

Pennsylvania Operations

With 200,000 feet found at 4,602 feet, Potter Development Co. was running pipe and cementing on its test on the Ray French farm, Clymer Township, Tioga County. Penn United was drilling at 170 feet on the C. Wainwright farm, Lawrence Township, same county. Cowanesque Natural Gas Co. was drilling at 5,303 feet on the E. A. Furman farm, Allegany Township, Potter County. Hanley & Bird was drilling at 4,474 feet on the George Burd farm.

Sylvania Natural Gas Corp. is drilling at 5,150 feet on the Merle A. Hill farm, Genessee Township, Potter County, after reaching the Tully lime at 5,146 feet. Slocum and others is casing at 5,011 feet on the L. Thompson farm, same county and county, after reaching the Tully lime at 4,995 feet. Wyoga Oil & Gas Co. is drilling at 5,186 feet on the Tassel No. 3, Hebron Township, same county, after reaching the top of the Tully lime at 5,012 feet.

New York Operations

Trumball and others is still shut down at 1,000 feet on the W. B. Lasher farm, Throop Township, Cayuga County. Southwestern Natural Gas Co. was fishing for the bailer at 4,200 feet on the T. Moran farm, Alma Township, Allegany County. Belmont Quadrangle Development Co. was shut down at 4,735 feet on the Van Copen and Whiteman farm, Willing Township, same county. Schrack and others was fishing at 3,960 feet on the M. M. Loring farm, same township and county. Sanderson and others was shut down at 3,186 feet on the Leon Bennett farm, Granger Township, same county. Godfrey L. Cabot, Inc., was drilling at 250 feet on the Alice Cunningham farm, and moving in on the Dora Barber farm, both in Willing Township, Allegany County. Wyoming Natural Gas Co. is shut down at 1,783 feet on the C. H. Caulling farm, York Township, Livingston County.

Central West

Tests Beyond Development Usually Add New Territory

By GEORGE A. WHITNEY

FINDLAY, Ohio, Aug. 12.—The Central West fields show a renewal of activity and while the wells are not as prolific they are worth going after. Numerous old-time producers are being dismantled and the pipe and material used for the drilling of new wells. Considerable leasing for testing spots in advance of previous development work, usually adds new territory to the fields. Wood County alone abandoned more than 30 old-time producers and Sandusky County about 20.

In Allen County, H. F. Kelly & Co. is drilling on the Martin Brothers farm, Section 20, Perry Township, and abandoned No. 1 on the F. P. Sellers, Section 30, same township.

CENTRAL OHIO

In Ashland County, McConnell and others' No. 4 on the A. J. McClure farm, Section 10, Lake Township, is a gas well at 529 feet. No. 5, same farm is drilling. In Jackson Township, Hulse & Tedlow are drilling on the William F. Landis farm, Section 11, and Ohio Fuel Gas Co. has a location for No. 1 on the Priest & Kauffman farm, Section 8. Same company has a location for No. 1 on the Harley E. Jones farm. Section 20, Mohican Township.

In Lorain County, William Dempsey drilled a dry hole on the Lewis F. Kroehle farm, Section 15, Elyria Township. Schneider & Wyles are drilling No. 3 on the R. L. Miller farm, Lot 6, Ridgeville Township. Ohio Fuel Gas Co. is drilling No. 1 on the A. S. Gibson farm, Lot 80, Columbia Township.

In Summitt County, City Natural Gas Works is drilling No. 1 on the Mertz & Moyer farm, Section 14, Pleasants Township, and has a rig for No. 3 on the F. A. Ruff farm, Section 31, Rush Creek Township.

In Holmes County, Ohio Fuel Gas Co. has a location for No. 2 on the Charles McFarland farm, Lot 1, Richland Township, and Hulse & Tedlow are drilling No. 1 on the Paul J. Blanchet, Lot 12, same township.

In Stark County, East Ohio Gas Co. has a location on the M. D. Smith farm, Section 3, Plain Township. In Pike Township, Wiser Oil Co. has a location on the Ralph Shaffer and others land, in Section 5. Lyons & Co. has a rig for No. 1 on the Homer E. Snyder farm, Section 11, Perry Township. East Ohio Gas Co. has a rig for No. 1 on the G. and E. Whetstone farm, Section 13, Jackson.

In Perry County, Marshall Bauman's No. 1 on the A. J. Nautz farm, Section 9, Reading Township, is drilling. Wehrle Brothers are drilling below 1,250 feet in No. 1 on the David Helzer farm, Section 36, Thorn Township. Caywood-Mid-East Gas Co. has a rig under construction on the Homer Caywood farm, Section 11, Reading Township. Mid-East Gas Co. is spudding No. 1 on the O. C. Ansel & Co. farm, Section 13, same township. Ohio Fuel Gas Co. is drilling below 3,020 feet in No. 1 on the Irene and William Stoner farm, Section 5, Reading Township, and is drilling below 1,100 feet in No. 1 on the H. H. Ridenour farm, Section 7, same township. Kachelmacher Oil Co.'s No. 10 on the Hemlock Coal Co.'s land, Section 24, Coal Township, produced 5 bbls. at a total depth of 3,554 feet. Mid-East Gas Co.'s No. 1 on the James A. Hull farm, Section 18, Clayton Township, produced an initial of 24 bbls. Marshall Brothers are drilling No. 6 on the S.C.C.C. farm, Monroe Township.

In the Cleveland area, J. W. Cushing is drilling below 1,625 feet in No. 2 on the Aluminum property, Lot 291, Newburg Township.

KENTUCKY

Total runs from wells served by the Illinois Pipe Line Co. in western Kentucky during the month of July were 133,968.45 bbls.

There is a little active development work, especially in Ohio and Hancock Counties. Hoover Drilling Co.'s No. 1 on the C. P. Barnett farm was dry in the Jet sand, and Joseph B. Mayers' No. 6 in the Grover Pool initialled 50 bbls.

In Ohio County, Ohio Oil Co.'s No. 10 on the A. G. Pfister 102-acre farm produced an initial of 35 bbls. Same company's No. 1 on the Vernie Eskridges farm, south of Fordsville, was dry. W. E. Hupp & Co.'s No. 2 on the Reat Midkiff farm, south of Fordsville, produced 18 bbls. J. C. Miller & Co.'s No. 4 on the Martha G. Webster farm, 2 miles south of Fordsville, produced 25 bbls. initial. Joseph Oil Co.'s No. 2 on the Clark heirs farm, was dry in the Jet sand. Snowden-McSweeney Co.'s No. 20 on the H. J. O'Dell farm, produced 10 bbls., and James C. Ellis' No. 2 on the W. Perry farm, was dry in the Jet sand.

INDIANA

Indiana Field is showing the usual active development work, there being some fairly good gas and oil wells brought in. In Gibson County, Mid-West Development Corp.'s No. 2 on the Jess Simms farm, SE SE Section 15, Columbia Township, produced 5 bbls. initial and Managers Discount Corp. is drilling No. 1 on the Emily Holcomb farm, SE SE Section 27, same township. In Center Township, Managers Discount Corp.'s No. 1 on the A. J. Drysdale farm, SW Section 16, produced an initial of 5 bbls. The same company's No. 2, SW SW Section 16, on the A. J. Drysdale farm, is a gas well at 433 feet, and No. 3, same farm, is a gas well at 440 feet. Mid-West Development Co. is drilling No. 1 on the William A. and Etta Hodges farm, Section 2, Center Township. Same company is drilling No. 1 on the Tony Williams farm, Section 33, same township. In Washington Township, William Bell's No. 1 on the Mary Shawhan farm, SW SW Section 1, is a gas well. Indiana Southwest Gas Corp. is drilling Nos. 1 and 2 on the Louisville Joint Stock Bank, Section 21.

In Pike County, Claud Noble's No. 1 on the William S. Sibley farm, Section 6, Washington Township, was dry. Robert Watson is drilling No. 3 on the Laura Dillon farm, Section 18, Washington Township. Murphy Oil Co.'s test on the Stewart Brothers farm, Section 33, Clay Township, was a gas well. Mid-West Development Corp.'s No. 2 on the Frank Schrolucke farm, Section 18, Jefferson Township, is a gas well.

In Knox County, Harry Hanson & Co. are drilling on the Oliver M. Smith farm, Section 4, Harrison Township. Pierson, Lloyd & Thayer are drilling No. 2 on the N. A. Hall farm, NW SE NE Section 15, Busseron Township.

In Decatur County, Westport Natural Gas Co. is drilling Nos. 1 and 2 on the Zack Boicourt farm, Section 32, Swan Creek Township. Unknown party completed a gas well in No. 1 on the John and Nettie Parker farm, SE SW NE Section 36, Clay Township, at 878 feet. C. H. Parriott is drilling No. 1 on the Charles Honey farm, Section 21, Veale Township.

In Daviess County, Hartford Oil Co. is drilling No. 3 on the Glendenning farm, Section 34, Harrison Township, Mid-West Developing Co.'s No. 1 on the Tillman R. McCafferty farm, SW NE Section 31, same township, was dry. Delmar Patterson & Co. is drilling No. 1 on the C. F. Ageton farm, Section 33, same township.

In Cass County, Abe Shelby is drilling No. 1 on the E. O. Skinner farm, Section 22, Miami Township. Scott Stumler is drilling No. 1 on the Mary Milks farm, Section 5, Smithfield Township, DeKalb County. Hunt & Franks are drilling No. 1 Bone farm, Section 13, Bear Creek Township.

In Martin County, Spaulding & Fisher's No. 5 on the E. D. and E. S. Yarnell farm, Section 25, was dry at 525 feet. Fred S. Fisher's No. 6 on the E. D. and E. S. Yarnell farm, Section 25, Perry Township, was dry at 595 feet. George E. Nelson & Co.'s No. 1 on the Mary Armstrong farm,

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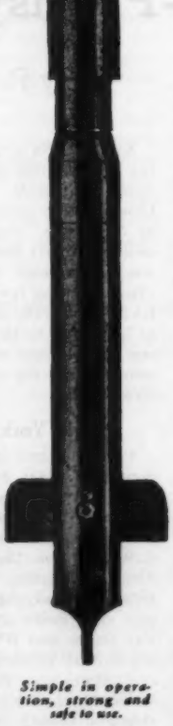

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Section 13, same township, was dry. In Perry County, Joseph B. Mayer's No. 1 John Schmidt farm, SW SW, Section 30, Tobin Township, was dry at 778 feet. Hupp & French are drilling No. 1 on the Peckenpaugh farm, Section 5, Troy Township. The Gardner Oil Co. is drilling No. 1 on the W. F. Lanman farm, Section 27, Clark Township.

In Lawrence County, J. T. Imler is drilling No. 2 on the Homer Ragsdale farm, NW SW Section 26, Pleasant Run Township.

Canadian Fields

Test in Highwood Area May Determine Extension South

By VICTOR LAURISTON

CHATHAM, Ontario, Aug. 10.—In Section 28-18-2w5, South Turner Valley Field, British-Dominion Oil & Development Corp.'s No. 4, LSD 6, is drilling into the Madison limestone after cementing casing in the top of the lime at 5,853 feet. Renfrew Royalties' No. 1, LSD 3, same section, bottoming in the Dalhousie sand at 5,540 feet, is running 8-inch casing. Pacalta Oils' No. 1, LSD 7, has cleaned out to bottom at 5,498 feet and is waiting for a shot. It had an initial recovery around 70 bbls. a day in March but in June had dropped to 44 bbls.

In the south end, Union-Freehold Oil Corp.'s No. 1, LSD 8, Section 21-18-2w5, is fishing after getting the Madison lime at 5,595 feet. In North Turner Valley, Model Oils' No. 3, LSD 1, Section 22-20-3w5, offsetting Royalite's No. 26 producer, is below 2,939 feet.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, LSD 12, Section 13-31-10w5, is drilling in alternate hard and soft sands below 5,020 feet.

On the Moose Dome west of Calgary, Moose Oils' No. 2, LSD 8, Section 29-22-6w5, is preparing to resume after making a water shut-off with 18-inch casing at 100 feet.

On the New Valley structure east of North Turner Valley, New Valley Oil Co.'s No. 1, LSD 4, Section 6-21-2w5, is below 2,940 feet and logging satisfactorily.

Farther south on the Aldersyde structure, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-28w4, is below 6,440 feet with continued small shows of crude.

On the Highwood-Sinclair structure south of Turner Valley, Maple Leaf Royalties' No. 1 Banner, LSD 6, Section 34-17-3w5, is below 2,025 feet. It has got through the coal marker in the Kootenay formation and entered a dark green shale with some increase in gas. It is the nearest test to the producing area of South Turner Valley and will determine the possible extension of the producing area to the south. The Maple Leaf test is logging higher than the typical Turner Valley wells, getting the Blairmore formation around 500 feet where Highwood-Sarcee Oils' No. 1, LSD 16, Section 21-18-2w5, in South Turner Valley got the same formation at 3,350 feet. It got about 5,000,000 feet of gas in the Blairmore. On the Del Bonita structure, southern Alberta, Terminal Oil Co.'s No. 1, NE Section 18-1-21w4, is standing after cementing 7-inch casing at 4,895 feet. A statement by Dr. Robin Willis, geologist for the company, says: "The past three weeks were spent reconditioning and cleaning out the hole after bridging and caving was started by a burst of gas which thinned the mud and apparently put fragments of the bottom-hole formation up the hole as they came out. The last bottom-hole sample showed a sand similar to that frequently found just above the Madison at the base of the Ellis, and fragments of limestone were obtained from cuttings while drilling out the bridges. When the gas was first struck a strong sulphur odor was reported and noted over a half mile from the rig. Though less than 100 feet of Ellis—an unusually thin section—was drilled, it is quite possible this is its full thickness on the crest of Del Bonita fold. This is the sharpest and best defined fold as yet drilled in the southern Alberta plains, and such a thinning is found in many of the prolific folds of similar type in Oklahoma and is generally considered a favorable indication. The Terminal location was carefully selected to allow for an unexpected downward shift of the axis and apparently hit the mark." It will resume drilling late in August, the prospective producing horizon being just below the Ellis-Madison contact.

On the adjacent Twin River structure, E. H. Rosenburg's No. 3 Twin River, LSD 9, Section 10-2-20w4, has steel derrick up and is moving in rotary equipment. Acreage on this structure is mainly held by Nordon Corp., the Rosenburg-Halper and Henry-Zandmer interests. Two previous tests got fair shows of gas and crude in the top of the Madison lime.

In the Del Bonita area, Lloyd Clinch and associates have subleased acreage in Township 1-21w4. Sunshine Oils, Ltd., backed by British Columbia mining interests, has taken 5,100 acres and has a tentative location in LSD 10, Section 19-1-21w4, north of Terminal Oil Co.'s No. 1. Victoria Syndicate, financed by Victoria, British Columbia, interests, has subleased NE Section 17-1-21w4, east of the Terminal well. North of this Section, Del Bonita Syndicate, Ltd., has leased SW Section 20-1-21w4, and considerably farther north, Royal Canadian Oil Co. has subleased SW Section 31-1-21w4.

In the Taber area, Plains Petroleum's No. 1, Thomas Engleston farm, LSD 12, Section 25-9-14w4, has derrick up and is moving equipment from South Turner Valley. Gas is being piped from the Bow Island line a mile north.

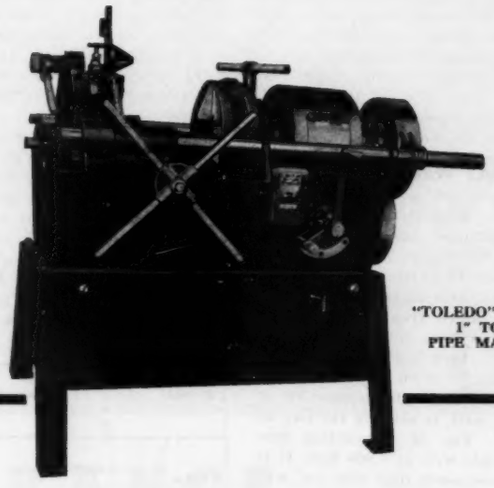
Hudson Bay Junction

In the Hudson Bay Junction area, northern Saskatchewan, Trail Blazer Oil & Gas Co.'s No. 1, SW Section 32-44-3w2, deepened to 1,085 feet without getting commercial production. Some heavy crude was encountered in this test last fall at 590 feet. Since then the area has been extensively geologized and structure testing by Amalgamated Gas & Oil Co. at Kakwa, 35 miles farther south, has indicated a shallow gas field with considerable production. No deep drilling has been done in the Kakwa area. There is no large market for the gas, but it is thought deeper drilling may secure commercial oil. A structure testing outfit from Minneapolis has been delivered at Kakwa and the Amalgamated company is planning a series of shallow tests preparatory to locating a deep test.

Drilling in Ontario

In the Dover Field, Kent County, Ontario, Stover-Rawlings' No. 1, Charles Peltier farm, Front Concession and Stirling Side Road, Dover East Township, has been abandoned after drilling to 3,272 feet and getting only a small show of gas in the Trenton, 11 feet below the break.

In Dover East Township, Prairie Oil & Gas Co.'s No. 4, Stephens farm, Lot 2, Front Concession, got a strong gas flow, estimated 10,000,000 feet a day, at 3,029 feet, raising the tools several hundred feet and destroying 300 feet of cracker and cable. After blowing down several hours the gas still gauged 3,250,000 feet a day. As this flow was only 135 feet in the Trenton and other wells have got their main gas supply around 360 feet in, it is being deepened.



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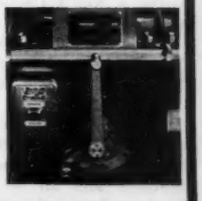

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RODESSA HAS 6,600-BBL. WELL
TWO GOOD ARKANSAS WELLS

By
J. R. CRUMPTON

SHREVEPORT, La., Aug. 12.—After 10 days of testing to gauge with various sized chokes and separator connections, the United Gas Public Service Co.'s No. 1 I. L. Young, C E half SE Section 21-23-16, the discovery well in the Rodessa Field, was officially completed. The well was given a potential daily production of 6,600 bbls. on the basis of a maximum flow for three hours. It is flowing at this writing about 84 bbls. per hour through 1-inch choke on tubing, two wings, and from one-quarter inch to 1¼-inch chokes on casing, two wings, with some of the wings of both tubing and casing being closed part of the time. In other words, the Standard Pipe Line Co. of Louisiana is running an average of 2,000 bbls. daily from the well.

Nine Wells Drilling

Nine wells are actively drilling in the Rodessa area in a race to be the second producer. Arkansas-Louisiana Gas Co.'s No. 1 J. S. Teamer, SE cor. SW Section 13-23-16, is the farthest outpost well drilling to the northeast, about 2½ miles from the discovery well. It is drilling in sandy shale at 2,826 feet. Haynes Production Co.'s No. 1 Tyson, Section 24-23-16, which was started before the completion of the Young well, is nearing the pay at 5,480 feet. Top of anhydrites was logged in this well at 4,869 feet. It is generally conceded that this test will be a gasser as it contours on the same level as United Gas Public Service Co.'s No. 1 Barr, Section 29-23-16, 1½ miles southwest of No. 1 Young, and which was completed last week as a 58,000,000-foot gas well. The Haynes No. 1 Tyson is 2¾ miles east of the initial well. Two tests drilling are offsets to the discovery well. R. W. Norton's No. 1 Caddo Levee Board, Section 21-23-16, has set 13⅜-inch at 440 feet and drilling at 850 feet. The United Gas Public Service Co.'s No. 1 Bremer, an offset to the east, set 13⅜-inch at 716 feet and drilling at 1,581 feet. The other active rigs in this area are in Sections 14 and 15, from 1 to 1½ miles northeast of the producer and all of them have set the first string of casing from 440 to 700 feet and are drilling ahead. The minerals division of the State Conservation Department requires that three strings of casing be set in the Rodessa area, the second string around 2,200 feet, usually 10¾-inch, and the third string above the pay horizon. The Rodessa townsite, where numerous locations have been staked, does not boast a spudded well. United Gas Public Service Co.'s No. 1 Thomas Unit, Section 23-23-16, is barely outside the townsite limits to the north and is drilling in hard lime at 3,225 feet. It is probable that the townsite operators are waiting on the outcome of this test. A location was staked during the past week due north of the discovery well just inside the Louisiana line from Miller County, Arkansas. It is watched with interest.

In Bossier Parish

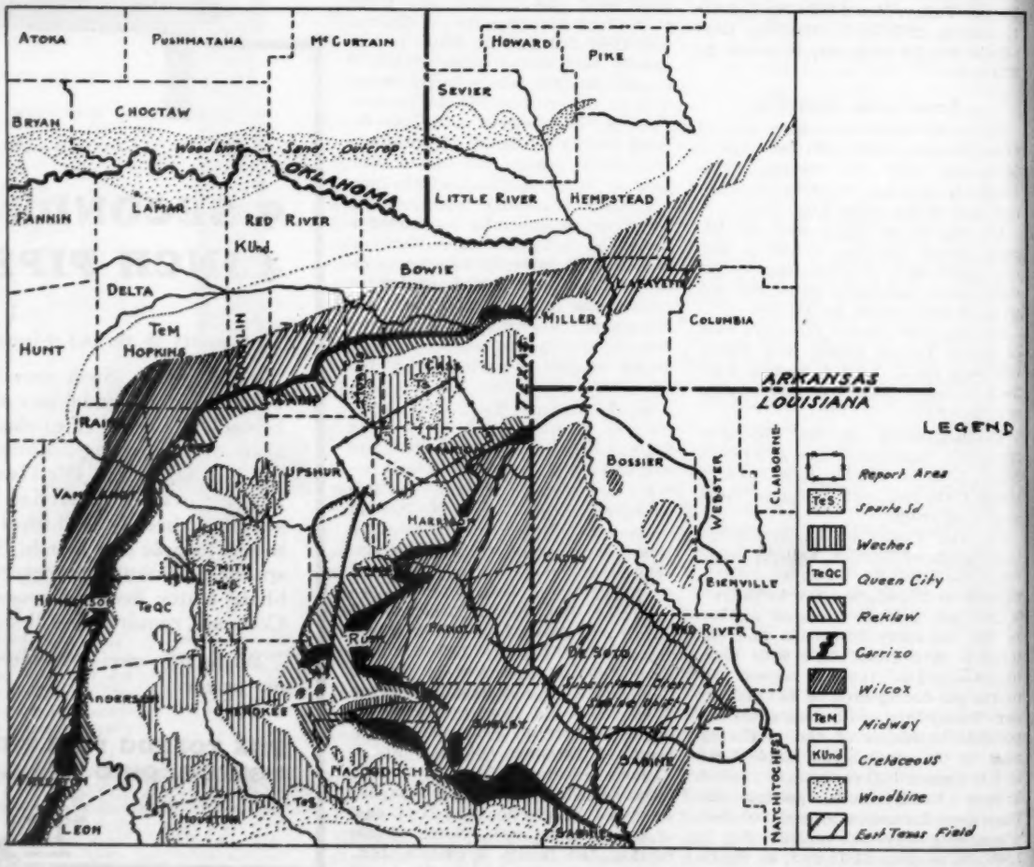
Plain Dealing Syndicate's No. 1 Dodson, Section 25-23-13, Bossier Parish, is nearing the pay horizon of the same company's No. 1 King, Section 36-23-16, which was completed as a 5,500,000-foot gasser from the Blossom at 2,840 feet more than a month ago. A 15-minute drill stem test on the present well from 2,800-37 feet was dry and it is coring ahead. The elevation on the King well was 329 feet making the pay sand sub sea 2,511 feet, and surface elevation on the Dodson test is 378 feet or 2,459 feet sub sea for its pay level provided both wells check. This gives the present test 52 feet more to go before contacting the sand in the discovery gas well, or a total depth of 2,889 feet. It is not known at this writing how the two wells are checking.

Another Bossier wildcat, W. A. Kirkland's No. 1 Jarrett & McKeller, Section 3-21-13, cored 2 feet of sand from 2,640-42 feet and a drill stem test from 2,634-42 feet developed two joints of mud. A core from 2,642-50 feet was coarse gray sand, and the test is coring ahead. Bossier Oil & Gas Co.'s No. 3 Sherrill, Section 13-19-12, is drilling at 1,845 feet and Hawkins & Bird's No. 1 Scanland, Section 32-20-11, set 10-inch at 78 feet and is drilling at 346 feet. The latter test is northwest of the shallow Bellevue Field a few miles in the vicinity of the old town of Bellevue.

Other North Louisiana wildcats follow: Catahoula Parish, McIntyre and others' No. 1 Tensas, Section 18-10-6e, set 10-inch at 347 feet, logging the top of the Jackson at 264 feet; Jackson Parish, American Liberty Oil Co.'s No. 1 Lusk, Section 1-16-1w, topped the Monroe gas rock at 2,626 feet, contacted base of chalk at 2,936 feet, top Ozan 2,986 feet and tested salt water, tested salt water again in the Blossom which was topped at 3,253 feet, top of red beds at 3,785 feet and the test stands temporarily abandoned at 3,827 feet. A few miles northeast in Ouachita Parish, the same company's No. 1 Golson, Section 25-17-1e, topped the red beds at 3,515 feet and is temporarily shut down for rig repairs at 3,842 feet. A hot Lincoln Parish wildcat, Herman L. Brown's No. 1 Monstead, Section 10-17-4w, set 12-inch surface at 480 feet and is drilling at 1,100 feet. In Natchitoches Parish, Howard & Kittrell's No. 1 DeBlieux, Section 83-10-7, is drilling at 300 feet after setting 12½-inch casing at 186 feet.

Completed Wells

Aside from the Rodessa wells, the North Louisiana district reported three dry holes and two oil wells. Premier Investment Co.'s No. 5 Wetherbee, Section 14-19-11, Bellevue shallow field, is pumping an estimated 10 bbls. of oil from 465 feet. In the Converse area of Sabine Parish, Lee Whitehead and others' No. 2 Frost Lumber Ind., Section 29-9-13, is flowing 30 bbls. daily from 1,645 feet after using acid in chalk rock. Two Caddo Parish tests, Recovery Oil Co.'s No. 1 Sibley, Section 15-19-14, was abandoned without testing at 2,482 feet and the Leonard Co.'s No. 2 Dickinson, Section 36-21-15, was salt water and abandoned at 2,375 feet. In the



—Drawn by La Verne Decker.

General geology around Rodessa Field, in Caddo Parish, northeastern Louisiana

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THE OIL AND GAS JOURNAL
TULSA, OKLAHOMA

Many area of the Zwolle Field, Sabine Parish, the Texas Co.'s No. 1 Mary Cutrer, Section 11-7-11, was dry and abandoned at 2,850 feet.

Estimated Production

Estimated daily gross production all companies week ending August 10, 1935:

NORTH LOUISIANA

	Bbls.
Bellevue	600
Caddo light	9,660
Caddo heavy	1,985
Converse	1,110
Cotton Valley	415
DeSoto and Red River	1,450
Elm Grove	425
Haynesville	3,450
Holly	155
Homer	2,670
Pleasant Hill	160
Sarepta-Carterville	530
Urania	2,955
Zwolle	1,510
Total	27,075

SOUTH ARKANSAS

Champagnolle	2,320
El Dorado	2,260
Lisbon	320
Miller County	1,555
Nevada	870
Smackover light	2,290
Smackover heavy	18,115
Stephens	635
Urbana	2,100
Total	30,465

ARKANSAS

This district reported two good producers in widely separated proven areas. In the Miller County Field, Magnolia Petroleum Co.'s No. 8 Olivet, Section 3-16-26, is pumping 370 bbls. daily from 2,942 feet. In the same area, Lee Timberlake's No. 2 Frost estate, Section 27-15-25, was abandoned without a test at 2,450 feet. An outpost well in the Urbana area of Union County, Marine Oil Co.'s No. 5-E W. B. Thompson, Section 10-18-13, is flowing through casing 516 bbls. of pipe line oil from a total depth of 3,567 feet.

The wildcats in the Arkansas district follow: Ashley County, Texas Seaboard Oil Co.'s No. 1 fee, Section 28-17-4, drilling at 2,012 feet; Calhoun County, the Hunter Co.'s No. 1 Stout Lumber Co., Section 33-16-13, a recently staked wildcat, has spudded in and drilling at 50 feet; Lafayette County, Transportation Petroleum Co.'s No. 1 Cockran, Section 26-19-15, has set 10-inch surface at 215 feet; Ouachita County, McCullough-Brown, trustee's No. 1 G. W. Rowe, Section 2-12-19, is drilling in hard shale at 1,994 feet; Poinsett County, Rockwell Development Co.'s No. 1 W. A. Smith, Section 13-11n-3e, is drilling in sandy shale at 800 feet. The Gulf Refining Co.'s No. 49 Louis Werner, Section 5-16-16, on the western flank of the Smackover area, Union County, is drilling in hard rock at 7,919 feet.

MISSISSIPPI

A wildcat recently spudded in in Grenada County, Mississippi, is making good progress. W. L. Stewart and others' No. 1 W. W. Wood and others, Section 19-22n-5e, set 12½-inch surface casing at 585 feet and is drilling in hard gray sandstone at 4,008 feet. In Amite County, Mineral Resources Inc.'s No. 1 Anderson, Section 14-3n-3e, is arranging to resume drilling from 550 feet. Operators are taking on new leases to enlarge the block surrounding the test. White & Jones' No. 1 Ballou, Section 17-24n-7w, Bolivar County, is drilling in sandy shale at 1,115 feet. A Washington County test, Mid-Continent Development Co.'s No. 1 Lee, Section 33-15n-8w, is renewing leases in the block before deepening from 2,175 feet. Jack Vale and others' No. 1 Moody, Section 2-13n-14e, Winston County, is shut down at 2,250 feet in sandy shale while operators take new leases.

Only one completion was reported from this district, Cleve Love and others' No. 1 Ascher, Section 18-5n-2e, Rankin County, salt water and abandoned at 2,477 feet.

A test recently completed in Baldwin County, Alabama, had barren results. Mamie McCurry and Joe Modisett's No. 1 Southern Kraft Corp. Section 28-25-4e, was abandoned as dry in chalk at 5,027 feet.

Rocky Mountain Runs

Estimated daily average production for week ended August 10:

WYOMING

	Bbls.
Salt Creek	16,660
Big Muddy	1,550
Badger Basin	30
Black Mountain	290
Byron	610
Dallas Derby	520
Dutton Creek	80
Elk Basin	600
Ferris	20
Frannie	810
Garland	780
Grass Creek	4,350
Greybull	10
Hamilton Dome	1,910
Hudson	270
LaBarge	1,280
Lance Creek	1,550
Lost Soldier	1,390
Mule Creek	shut in
Midway	80
Notches	shut in
Oregon Basin	3,210
Osage	820
Pilot Butte	20
Rex Lake	shut in
Rock River	1,540
South Casper	500
Poison Spider	250
Teapot	20
Total Wyoming	39,160

MONTANA

Buckley-Border	240
Cat Creek	870
Cut Bank	5,200
Dry Creek	290
Kevin-Sunburst	3,400
Lake Basin	50
Pondera	1,270
Total Montana	11,320

COLORADO

Florence	310
Fort Collins and Wellington	400
Iles Dome	2,640
Moffat	500
Orchard	70
Rangely	80
Tow Creek	180
Total Colorado	4,180

NEW MEXICO

Artesia	440
Cooper area	6,170
Eunice area	8,000
Hobbs	31,020
Hogback	190
Hospah	shut in
Jal	4,240
Lea area	1,340
Maljamar	1,470
Rattlesnake	700
Table Mesa	90
Total New Mexico	53,660
Total Rocky Mountain region	108,320

Gasoline Plant Operating

CALGARY, Alberta, Aug. 10.—The new gasoline absorption plant of Royalite Oil Co. on the Sterling-Pacific lease in South Turner Valley, is in steady operation, processing approximately 40,000,000 feet a day. This is the third absorption plant in the Turner Valley Field, Royalite Oil Co. operating a plant of 115,000,000 feet capacity in the central field, and Gas & Oil Products, Ltd., having one on the Mercury lease, Section 4-19-2w5.

Dr. D. T. White Memorial

Three tons of a petrified tree, found by John Fitts, Ada geologist, has been erected on the campus of East Central State Teachers College at Ada, Okla., to the memory of Dr. David T. White, one of the leading geologists and paleontologists of the United States, who died in February.

Kansas Developments

By JAMES McINTYRE

OXFORD POOL'S BIG WELLS IN SIMPSON DOLOMITE CONTINUE

The Oxford Pool in Sumner County, where well owners are deepening old wells to the Simpson Dolomite and in some cases getting big production continued to be the most interesting spot in Kansas in the past week.

Following the performance of the Amerada Petroleum Corp. and Sunray Oil Co.'s No. 9 Gassoway, which made a potential production of 5,820 bbls. in 24 hours, Shell Petroleum Corp.'s No. 3 B Scoggins, 660 feet N and 1,100 feet E, SW cor. Section 14-32-2, pumped and flowed a potential production of 2,517 bbls. in 21 hours at a total depth of 2,900 feet, in Dolomite. Later the well was reopened and flowed 315 bbls. in three hours through casing and was shut in again.

Monday's report on Barnsdall Oil Co.'s No. 3-A Wenrich, 200 feet from N and 1,100 feet from E lines of NW quarter Section 23-32-2, showed it had found Simpson at 2,820 feet and was drilling at 2,855 feet with the well slopping over. It was then believed to be about 30 feet above the big pay.

The accompanying map of the Oxford Pool is a reproduction of one made in the heyday of the Oxford Pool, which was opened in 1927 and which was believed to have been drilled up until the recent campaign of deepening was started.

Amerada Petroleum Corp. completed its No. 9 Gassoway, SW SE SW Section 14-32-2, which had been deepened from 1,633 feet to Simpson dolomite at 2,825-65 feet. When given its potential test it produced 5,820 bbls. in 24 hours.

New Operations

Amerada Petroleum Corp. and Sunray Oil Co. were cleaning out to deepen No. 10 Gassoway, 688 feet from S and 1,145 from E lines of SW quarter Section 14-32-2, in the Oxford Pool, old total depth 1,646 feet. Shell Petroleum Corp. was cleaning out No. 1A Rothwell, 1,046 feet S and 212 W of Center Section 14-32-2, old total depth 1,261 feet, to be deepened to Dolomite, and likewise No. 3A Rothwell (twin to No. 3), SW NE SW Section 14-32-2, old total depth 1,643 feet. In addition to these wells to be deepened there are a number of others on their way down to the Dolomite in the Oxford Pool seeking the big production obtained by the Amerada-Sunray's No. 9 Gassoway.

In the Wellington Pool, E. B. Shawver's No. 2 Erker, C N half S half NW Section 33-31-1w, flowed 135 bbls. of oil in 14 hours from Chat at 3,658-94 feet and was then acidized. Sinclair Prairie Oil Co.'s No. 3 Kamis, SW NW SW Section 28-31-1w, swabbed 40 bbls. of oil in eight hours from Chat at 3,652-95 feet and was then acidized.

T. A. Morgan, state oil umpire, has notified producers that in the future it will be necessary to gauge the flow of gas in all combination oil and gas wells at frequent intervals and he asks all owners or operators of such wells to equip and maintain the vent lines or risers in such manner as will enable the umpire's field men to take gauges with as little delay as possible. The umpire's instructions to operators in this matter are that the top of all vents or risers should be one piece of pipe, with plain smooth ends, free from collars, holes, other connections or any inside obstruction, for a length of at least eight times the diameter of the pipe. "For example," Mr. Morgan says, "the test nipple on a 4-inch riser should be at least 32 inches in length above the top collar. The top end should be cut square off and be free from burrs or other obstructions. Accurate gauges cannot be made on risers or vents that are slope cut, obstructed, perforated, or have irregular tops."

Russell County

Buffalo Oil Co. completed No. 6 Schaffer-Anschutz, NW SW SW Section 27-13-14w, Russell County, potential production 482 bbls. of oil and 35 bbls. of water from Oswald lime pay at 3,030-40 feet, which had been acidized.

I. W. Murfin's No. 1 Moore, a wildcat location, was abandoned after cellar had been dug and rig material moved in.

Empire Oil & Refining Co.'s No. 2 Johnson, SW SW NE Section 2-14-15w, was completed. It had Oswald lime at 3,061-3,107 feet, which was acidized. The well pumped 653 bbls. in 24 hours.

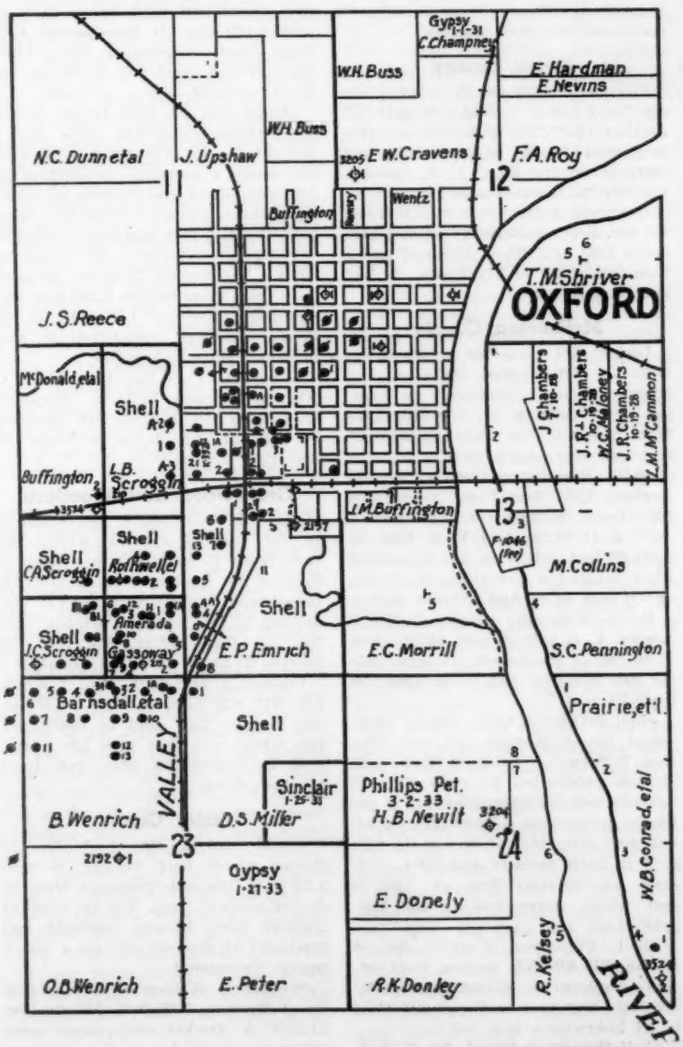
Gypsy Oil Co.'s No. 1 Gurney, NW NW SE Section 23-14-14w, was abandoned, total depth 3,230 feet. It was plugged back to 3,045 feet and acidized. It pumped 6 bbls. of oil and 94 bbls. of water.

First reports on new work in Russell County include Phillips Petroleum Co.'s No. 1 Jellison, SE SE SW Section 19-13-14w, building rig; Empire Oil & Refining Co.'s No. 5 Ehrlich, 181 feet from N and 988 from E lines of SE quarter Section 28-13-14w, location; Empire Oil & Refining Co.'s No. 3 Johnson, NW SW NE Section 2-14-15w, moving in material; Billings and others' No. 6 Witt, NE NE SE Section 4-14-15w, cellar; Coralena Oil Co.'s No. 1 Berrick, NE NW NE Section 6-15-13w, cellar; Signal Oil Co.'s No. 1 Weeks, SE SE NW Section 34-15-13w, location.

Barnsdall Oil Co.'s No. 1 Krug, SW SW NE Section 34-15-14w, had Silliceous lime at 3,324-28 feet, total depth, and oil rose in the hole 600 feet.

Skelly Oil Co.'s No. 1 Weeks, NE NE SW Section 34-15-13w, had Silliceous at 3,318-23 feet, total depth. It swabbed 90 bbls. in six hours.

Phillips Petroleum Co.'s No. 1 Sellens, NE NE NW Section 35-15-13w, pumped 182 bbls. of oil and about 40 bbls. of water in eight hours from Oswald lime at 3,060-99 feet, total depth.



Oxford Pool in Sumner County, Kansas, where old wells deepened to Dolomite had big initial production

Kansas Production

Estimated daily average production of Kansas for the week ending August 10 and for the preceding week follows:

	Barrels	
	Aug. 10	Aug. 3
Burrton	15,775	20,375
Ritz-Canton	8,025	7,525
Hollow	3,325	3,825
Voshell	3,775	4,550
Johnson	1,000	1,100
Nikkel	3,100	3,575
Sedgwick County	7,675	7,725
Ellsworth County	8,770	7,405
Barton County	2,343	2,550
Rice County:		
Chase Pool	16,175	15,375
Raymond Pool	3,050	2,760
Remainder	5,985	5,835
Ellis County	507	500
Kingman County	770	825
Stafford County	1,470	3,445
Russell County	12,150	12,485
Greenwood County	10,500	10,450
Butler County	18,800	18,900
Other pools	16,053	16,510
Total Kansas	139,250	145,725

Rooks County

F. A. Gillespie & Son have material in for No. 1 Low, NE NE NW Section 12-6-18w, northern Rooks County.

Ellis County

Mutual Oil Co. had material in for No. 1-A Johnson, NW SW NE Section 9-13-19w, Ellis Cunty.

Tom Palmer and Storm King Oil Co.'s No. 1 Ruder, discovery well in southern Ellis County, SE NE NW

Section 17-15-18w, which produced 499 bbls. in 24 hours on a potential test at a total depth of 3,429 feet, had not been officially completed. The oil tested 44.5 gravity at a temperature of 80° F.

Rush County

Lario Oil & Gas Co., Madison & Hewitt's No. 1 Gillig, a wildcat in NE SE NW Section 24-17-17w, Rush County, was dry and abandoned in Granite at 3,547-58 feet, total depth.

Joe Aylward, Continental Oil Co. and Derby Oil Co. were building rig for No. 1 Brack, C SW quarter Section 14-18-16w, a communitized lease. E. L. Byers and others were building rig for No. 1 Ewing, C SW half W half SW Section 35-18-15w, a wildcat.

Ellsworth County

In the Lorraine Pool, Ellsworth County, Atlantic Oil Producing Co.'s No. 7 Rolfs, NW NW SE Section 14-17-9w, made a potential production of 1,976 bbls. in a 24-hour test, from Siliceous lime at 3,184-87 feet which had been acidized. It was completed.

Bradley & Scanlon and others completed No. 3 Mohney, SW SE SE Section 14-17-9w, in Siliceous lime at 3,186-95 feet. It was acidized and produced 1,831 bbls. in 24 hours.

Phillips Petroleum Co.'s No. 1 Melchert, NE SW NE Section 25-17-9w, was completed in Siliceous lime at 3,188-96 feet. It was acidized and produced 1,897 bbls. of oil in 24 hours.

Keith and others are moving in material for No. 1 Schepman, SW SW NW Section 22-17-10w, a wildcat (corrected ownership); Vickers and others were spudding No. 4 Janssen, SE SW NW Section 13-17-9w; Empire Oil & Refining Co.'s No. 1 Schmidt B, SE SE NW Section 14-17-9w, moving in material; Skelly Oil Co.'s No. 3 Dees, NE SE SW Section 14-17-9w, ponds dug; Carter Oil Co. and others' No. 1 Melchert, NW NW SE Section 23-17-9w, location; Phillips Petroleum Co.'s No. 2 Melchert, SW SW NE Section 23-17-9w, location.

Empire Oil & Refining Co.'s No. 1 Schmidt, SE cor. Section 11-17-9w, had Siliceous lime at 3,216-17 feet, total depth. Fluid rose in the hole 2,000 feet. It had not been tested.

Skelly Oil Co.'s No. 1 Dees, NE NE SW Section 14-17-9w, had Siliceous lime at 3,185-87 feet, total depth, and it was a hole full of oil in 30 minutes. Put on the pump it made 1,417 bbls. of oil in 16 hours.

Rice County

Magnolia Petroleum Co.'s No. 5 Beyers, NW SW NW Section 21-19-9w, Rice County, was completed. It had been drilled to Siliceous lime at 2,242-56 feet, but there was too much water along with the oil showing and it was plugged back to 3,254 feet. It made a potential production of 398 bbls. of oil and 740 bbls. of water, on the pump.

Gypsy Oil Co.'s No. 1 Dewitt, SE cor. Section 9-20-9w, made 1,101 bbls. initial production from Siliceous lime at 3,230-50 feet. It had been acidized. The well was completed. Same company's No. 2 Dewitt, NE NE SE Section 9-20-9w, was completed in Siliceous lime at 3,237-71 feet, total depth. It produced 560 bbls. of oil and 2 bbls. of water in 24 hours.

McPherson Drilling Co.'s No. 1 Leonard, SW SW NW Section 2-21-7w, was a hole full of water from Siliceous lime at 3,766-74 feet, and was abandoned.

Gypsy Oil Co. was moving in material for No. 4 Sheckel, C E half SW NW Section 31-19-10w; Tom Palmer and Atlantic Oil Producing Co.'s No. 3 Specht, SE SE SW Section 16-20-10w, rig up; Sinclair Prairie Oil Co.'s No. 8 Thompson, NE NE NW Section 21-20-10w, cellar dug. Material was on the ground for Gypsy Oil Co.'s No. 1 Miller, SE SE NE Section 9-20-9w; Gypsy Oil Co.'s No. 2 Keesling, SW SW SW Section 10-20-9w; and Gypsy Oil Co.'s No. 1 Hartle, NW NW NW Section 15-20-9w.

Phillips Petroleum Co.'s No. 1 Gouldner, SW NW NE Section 16-18-9w, found Siliceous lime at 3,230-37 feet. It swabbed an estimated 70 bbls. of oil and 110 bbls. of water in 4½ hours.

Lebow and others' No. 2 Doll, NE SE SW Section 20-19-9w, pumped 275 bbls. of oil in 24 hours from Siliceous topped at 3,246 feet, first oil at 3,265 feet, better pay at 3,281-86 feet, total depth. It was shot with 30 quarts. The well had not been completed.

Phillips Petroleum Co.'s No. 6 Mezger, NW NW NE Section 21-20-10w, pumped 671 bbls. in 24 hours from Siliceous at 3,351-55 feet, total depth.

Gypsy Oil Co.'s No. 1 Coffman, NW NW SW Section 5-20-9w, swabbed 340 bbls. of oil in 11 hours from Siliceous lime at 3,238-47 feet, but later pumped 395 bbls. of oil and 136 bbls. of water in 21 hours.

Mid-Continent Petroleum Corp.'s No. 1 Hartle, NW SW NW Section 15-20-9w, swabbed 13 bbls. of oil per hour from Siliceous lime at 3,212-18 feet, and was then acidized.

Barton County

Continental Oil Co. is building rig for No. 1 King, C N half N half NE Section 18-17-12w, a wildcat location in Barton County. Gypsy Oil Co. had material in for No. 2 L. A. Saeckel, SE NE NE Section 1-20-11w.

Continental Oil Co.'s No. 1 Risse, SE cor. Section 36-19-11w, found Siliceous lime at 3,275-82 feet and had a hole full of oil in 2½ hours. It had not been tested.

McPherson County

Dickey Oil Co.'s No. 1 Rolander, NW NE SW Section 30-18-2w, McPherson County, produced an average of 177 bbls. a day for four days from Kansas City lime at 2,310-25 feet and was completed.

Shell Petroleum Corp.'s No. 10 Decker, 1,317 feet from N and 330 feet from W lines of NE quarter Section 11-19-2w, had Viola lime at 3,383-96 feet, where it was completed after making a potential production of 604 bbls. of oil and 200 bbls. water.

E. B. Shawver completed No. 2 Legree, C S half S half SE Section 17-19-1w, as a gas well. It made 23,000,000 feet per day from Chat at 2,919-70 feet.

Shell Petroleum Corp. finally abandoned No. 1 Wenger, NE cor. Section 2-20-1w, a wildcat. This well showed production in Viola lime at 3,356-64 feet last May, making a potential production of 109 bbls. of oil but also 600 bbls. of water. It was shut in until recently and then deepened to Siliceous lime at 3,467-70 feet where water rose in the hole 2,400 feet.

Shell Petroleum Corp.'s No. 4 Koehn, SE SW NE Section 16-21-3w, was completed in Wilcox sand at 3,388-3,414 feet and produced 191 bbls. in 24 hours.

Shell Petroleum Corp.'s No. 5 Hull, 330 feet S and 1,362 feet W of C Section 11-19-2w, moving in material; Shell Petroleum Corp.'s No. 3 Finkle, 330 feet from N and 999 feet from E lines of NW quarter Section 23-19-2w, plugged back from 3,383 feet to 2,979 feet, to test; Continental Oil Co. and others' No. 1 Jones, SW SW SW Section 32-21-1w, rotary rig up.

McPherson Oil & Gas Co.'s No. 3 Chindberg, SW SW NW Section 32-18-2w, (corrected location), pumped 10 bbls. of oil per hour from Kansas City lime at 2,320-24 feet. It had been acidized.

Shell Petroleum Corp.'s No. 1 Siemens, NW NW NE Section 8-22-3w, swabbed 6 bbls. of oil per hour from Hunton lime at 3,504-14½ feet, total depth.

Harvey County

Shell Petroleum Corp.'s No. 8 Voth, NW cor. Section 4-22-3w, Harvey County, was a small producer. It started at 45 bbls. a day from Hunton lime at 3,485-3,509 feet.

Winkler Koch and others' wildcat on the Mueller farm, SE SW NW Section 15-23-2w, was dry and abandoned in Hunton lime at 3,670-3,700 feet. H. H. & S. Oil Co.'s No. 1 Frizzle, NE NE SE Section 31-23-2w, a wildcat, was dry and abandoned at 3,747 feet. It had the base of the Mississippi lime at 3,725 feet.

Reno County

Anderson & Kerr, Inc. and others' No. 1 Davies, NE cor. Section 28-23-7w, Reno County, a wildcat, was dry and abandoned in Siliceous lime at 4,095-4,119 feet. It had Kansas City lime, Chat, Mississippi lime, Viola lime, Wilcox sand and Siliceous, but no oil showed in any of them.

Dickey Oil Co. and Indian Territory Illuminating Oil Co.'s No. 4 Baughman, SW NW NE Section 3-24-4w, made a potential production of 242 bbls. of oil and 36 bbls. of water from Hunton lime at 3,594 feet, total depth 3,603½ feet, and was completed.

F. Hodge, receiver's No. 1 Palzer, SE SE NW Section 36-22-4w, plugged back from 3,646 feet to 3,390 feet and acidized, produced 142 bbls. in 18 hours and was completed. It also produced some salt water.

Gypsy Oil Co.'s No. 1 Krehbiel, C NW NE Section 35-23-4w, deepened from 3,326 feet to 3,355 feet, swabbed 70 bbls. of cut oil in 10 hours. It was then acidized.

Greenwood and Woodson

Oko Oil Co.'s No. 1 had machine in for No. 22 Sherman-Kelly, 200 feet from E and 620 feet from S lines of SW quarter Section 14-23-13, Greenwood County. Saco Oil Co. was drilling at 100 feet in a wildcat test, No. 1-A Hassenpflug, SW NW NE Section 34-25-14, Woodson County.

Connell & Marshall's No. 1 Klick, SW NW SW Section 20-25-14, Woodson County, had sand at 1,390-1,437 feet which was shot with 120 quarts and it flowed 50 bbls. per hour pinched down.

Butler County

Cosmic Oil & Gas Co.'s No. 54 Porter, C W half SE NE Section 1-26-4, in the old Towanda Pool in Butler County, had Wilcox sand at 2,408-11 feet. It was acidized and produced 55 bbls. of oil and a lot of water. Completed.

Sheldon & Wixson were spudding No. 1 Dohren, NW NW NE Section 11-25-3. A. Becker and others were drilling at 1,100 feet in No. 3 Glaze, 720 feet W and 1,520 feet N of SE cor. Section 4-29-4.

When Ames Met Gates and Joined Texaco

When Charles B. Ames, late chairman of the directorate of the Texas Corp., was a lawyer in Oklahoma, he made a trip to New York that brought him acquaintance with the then most picturesque of all Wall Street notables, John W. Gates already a lively figure in southwestern oil fields, but at that pretty hectic moment engaged with problems "touchin' on an' appertainin' to" subpoenas from the United States Senate. This story of their meeting is told by H. A. in The Wall Street Journal.

Mr. Gates, one afternoon, strolled down to Battery Park to listen to the sympathetic sobbing of the sea, fell into chat with a man with an umbrella—for 'twas as downcast and drizzling a day as subpoena sidesteppers ever drew—and—curious human nature at high pressure—found himself before long on his own poignant theme: What to do to keep from being done. He had discovered that the stranger was a lawyer, and the perfect listener.

"Tell me. What?" impulsed Gates.

Already he had corralled many of the topmost New York jurists; but that was no reason for the storied John W. not to go right on canvassing talent as it chanced along.

"You really want advice—from me, a countryman?"

"Shoot," called Gates. "I do want your notions—and I want to pay for 'em—s'pose we start with this."

Off a bulky roll came a bank note—$1,000.

Said the "countryman": "Not so fast, sir. Keep your change."

John Gates liked that satiric fling—quite new to him, repartee of that type.

"All right, we'll settle later," he conceded. "Now, again: what, if you were in my place, what would you yourself do?"

"Easy to answer that—no puzzle at all."

"Yes, yes; easy—but what?"

"Congress wants to meet you?"

"Does it? A dozen camping-out sheriffs are dead sure of it."

"Well, sir, there's only one uncertainty for you to consider . . . when does the next train go to Washington? Take it. Snap right up Capitol Hill. Bob into the presence of that investigating committee—have your energies with you, your voice in fettle, your outraged personal integrity on the firing line."

"Go along!" applauded the late appalled.

"Demand to know why you cannot be heard—why you are not allowed the chance to put your shameless accusers on the run. Don't disguise your hurt feelings that somebody over there in Washington is being hired by the interests, just to prevent your philan—"

"Say no more," Betcha a million said. I'm catching that train."

Next day the Washington dispatches chronicled that though Mr. Gates was insistent for hurry, statesmen felt that there must be dignified procedures . . . and before dignity ran its course, John Gates, more and more vociferous for rapid Senate action, was back in New York—meeting overtures from discommoded criticizers.

Yes; there were preliminaries to John W. Gates' Texas Corp.'s taking on of Country Lawyer Ames from down Oklahoma way.

Eastern Field Report

NEW ORISKANY SAND TEST IS SET FOR BEAVER COUNTY, PA.

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Aug. 12.—Another deep test which is scheduled for the Oriskany sand is starting in Southwest Pennsylvania. In South Beaver Township, Beaver County, John Galey and others have made a location and started hauling in materials on the William Graham farm. The location is on Brush Run exactly 4 miles south 26 degrees west of the Bench Mark 912 at Darlington shown on New Castle Quadrangle.

This test is about half way between the test on the Lehigh Portland Cement Co. property in Muddy Creek Township, Butler County, which found the Oriskany sand dry and the fair gas well of the Natural Gas Co. of West Virginia on the William Jenkins farm in Madison Township, Columbiana County, Southeast Ohio, and will be the first deep test in the vicinity. The Oriskany sand is thought to be about 3,500 feet below sea level at that point. Charles L. Sample, drilling contractor, has been given the contract.

It was an off week for operations in the lower Eastern fields. Fifteen wells only were completed and there were also two dry holes. Eight of the wells were producers with an initial production of 49 bbls. Two were fair tests.

SOUTHEAST OHIO

The seven operations in Southeast Ohio were fairly well scattered. In Ashland County, the Maple Oil Co. completed No. 4 on the Mrs. A. J. McClure farm in the SW Section 10, Lake Township, in the Berea sand and it is showing for a small gas well gauging about 75,000 feet a day.

In Knox County, Sterling C. Brown and others completed a test on the S. S. Simpson farm in Section 14, Clay Township, in the Berea sand which after shot produced 4 bbls. the first day.

In Monroe County, Lumbatis and Matz completed a test on the E. J. Knopf farm in the NE Section 34, Wayne Township. It was drilled in the Keener sand at a depth of 1,355 feet and produced 3 bbls. the first day after shot. In the SE Section 8, Center Township, Brenden and Trees drilled a test on the Peter Reasbeck farm through the Berea grit to a depth of 1,875 feet. It was dry in all formations.

In Noble County, C. A. Heisler and others completed No. 4 on the Carl Heisler farm in the NW Section 22, Elk Township, in the Germantown sand at a depth of 890 feet. It produced 3 bbls. the first day, natural, and will make a fair pumper.

In Washington County, Harry R. Buchanan estate completed No. 41 on the John A. Herland and Louisa J. Mendenhall lease in the SW cor. SW Section 32, Independence Township, in the First Cow Run sand at a depth of 449 feet. It produced only a half barrel the first day, natural, which was increased to 10 bbls. the first day after shot. In the southwest part of Lot 1,075, Palmer Township, Helen J. Burt completed a test on the Harvey Pugh farm in the Cow Run sand at a depth of 450 feet. It was good for a barrel a day, natural, which was slightly improved by shot.

SOUTHWEST PENNSYLVANIA

In Southwest Pennsylvania, there was one gas well and one dry hole and additional work starting. In Richhill Township, Greene County, H. E. Milliken and others completed drilling deeper No. 1 on the Charlotte Smith farm to a total depth of 3,391 feet. The Pittsburgh coal was at 920 feet; the Fifty Foot sand at 1,980-83 feet; the Gordon Stray sand at 2,063-65 feet, and gas in the Fifth sand at 3,391 feet. The volume is about 250,000 feet a day.

In Buffalo Township, Butler County, close to the Allegheny County line, A. F. Isler & Co. completed drilling a test on the Michael Kigler Kotora farm through the Fifth sand to a depth of 2,156 feet. It was dry in all formations.

In Allegheny County, J. S. Wally and others have reached a depth of 1,700 feet on the Wencel Heinl farm in Shaler Township. In this township, William Barton and Sam Lee are drilling on the Oliver Miller and others farm. In Harmar Township, J. F. Trees and others are drilling No. 4 on the Bauman heirs farm and have reached 1,300 feet.

In Beaver County, R. B. Abrams is drilling No. 6 on the Clara Walton Cook and others lease in Greene Township; the tools are at 700 feet.

In Greene County, Carnegie Natural Gas Co. has completed rig on the Hunt farm in Morris Township. In Center Township, this company is drilling at 1,890 feet on the J. H. Orndoff farm. In Jefferson Township, Peoples Natural Gas Co. is underreaming No. 1 on the William King farm at a depth of 2,137 feet.

In Dunkard Township, Greene County, Ira Conley is drilling on his own property. In Richhill Township, Lewis & Co. have pulled the casing on the Samuel Chess farm after a bad hole and may skid the rig. Wasmuth and Callahan are still fishing the bailer in No. 3 on the Daniel Goodwin farm. Sanney and others are rigging up on the Harvey farm.

In Amwell Township, Washington County, Carnegie Natural Gas Co. is drilling through the Thirty Foot sand at 2,675 feet on the T. M. Shrontz farm. This formation was dry. This company is down 2,709 feet in the test on the R. M. Carrons farm. The Nineveh Thirty Foot sand was at 2,679-2,709 feet.

In this township, Manufacturers Light & Heat Co. has reached 2,756 feet in No. 2 on the R. A. Rankin farm. The Thirty Foot sand was at 2,700 feet with about 306,000 feet of gas showing at 2,739-45 feet. This company has reached 2,500 feet on the C. and S. L. Hazlette farm.

In the same township, Wise Oil & Gas Co. has started drilling in the second test on the Welsey farm. F. K. Fawcett and others are starting the test on the B. A. Bonham farm.

In Cecil Township, Washington County, Steele, Morris & Co. shut down at 2,300 feet on the J. A. Augerer farm. In Peters Township, Lindsay & Co. are drilling at 2,250 feet on the S. L. Van Eman farm.

In West Bethlehem Township, Washington County, H. D. Freeland and others are down 1,000 feet on the Winfield McCarty farm. The Pittsburgh coal was at 499 feet.

In South Franklin Township, Washington County, Furman Nuss & Co. have completed rig on the James Pipes farm. Offsetting this across the line, Carnegie Natural Gas Co. will start a test on the John A. Dodd.

In South Union Township, Fayette County, William Snee and others have finished cementing and are drilling through it to drill by the bailer lost in the hole at a depth of 3,962 feet on the Summit Hotel property. A new cable is in use.

WEST VIRGINIA

Three producers were completed in West Virginia, one showing fair. In Wetzel County, Johns Gas Co. drilled deeper No. 3 on the B. W. Peterson farm in Center district to a total depth of 2,939 feet. Drilling down commenced at 2,189 feet with the Pittsburgh coal at 853 feet. The Gordon sand was at 2,917 feet with about 244,000 feet of gas showing at 2,933 feet. At 2,935 feet oil was struck which is estimated good for 25 bbls. a day.

In Ritchie County, a small producer was completed. Southern Oil Co. drilled deeper No. 2 on the A. W. Lemon farm in Murphy district to 2,082 feet, the Injun sand and it will make about 2 bbls. a week.

In Wood County on Plum Run in Williams district, Burnt Hill Oil Co. completed a test on the Fred Delancy farm through the Maxon sand. It will make 1½ bbls. from Salt sand.

Gas Wells

The best completion for the week was a test in Cabell County. In McComas district, W. C. Kingery and others drilled a test on the Pratt heirs farm to a total depth of 1,341 feet. The Big lime was at 1,113-1,273 feet; the Big Injun sand at 1,331-41 feet with gas showing at 1,339-41 feet at which depth drilling was suspended with an open flow of over 2,000,000 feet a day.

In Boone County, Pond Fork Oil & Gas Co. completed No. 21 on the Cole and Crane lease in Washington district as a small gas well at 2,363 feet. The Big lime was at 1,626-1,848 feet; the Big Injun sand 1,848-75 feet; the Berea sand at 2,311-48 feet with about 31,440 feet volume. In Sherman district, Owens Illinois Glass Co. completed No. 20 on the Peytonia Coal Land Co. lease in the Berea sand at a depth of 2,923 feet. It gauges 726,000 feet a day.

In Lincoln County, United Fuel Gas Co. completed a test, No. 4,555, on the Vincent Dailey farm in Carroll district, at a total depth of 2,107 feet. The Big lime showed at 1,290-1,450 feet; the Big Injun at 1,468-80 feet; the Berea sand at 2,046-57 feet with about 106,000 feet of gas a day at 2,047-54 feet.

In Ritchie County, Shannon Dawson completed a test on the E. C. Dawson farm in Murphy district in the Maxon sand at a depth of 1,928 feet. It gauges about 220,000 feet.

Deep Tests Drilling

Two tests in Elk district, Kanawha County, are drilling within a few feet of the Oriskany sand and are expected in within a short time. On the W. T. and J. H. Goshorn farm, Yoak Oil & Gas Co. is down 4,808 feet, or 107 feet in the Corniferous lime. The Oriskany sand is expected at about 4,818 feet and the hole is caving slightly.

In this district, Columbian Carbon Co. has reached 4,789 feet in the deep test on the G. and D. Copenhaver farm. The top of the Corniferous lime was at 4,706 feet and it is expected that the test will be completed in the Oriskany in three days. In this district, Benedum and Trees remain shut down at 4,703 feet on the Mary C. Wingfield farm.

In Malden district, another well is making rapid progress down to the Oriskany sand. Godfrey L. Cabot, Inc., has reached 4,720 feet in No. 7 on the Campbells Creek Coal Co. which is being deepened, but had to shut down for rig repairs. The Columbian Carbon Co. is drilling at 4,300 feet on the W. D. Lewis farm. On the Plus R. Levi farm, Godfrey L. Cabot, Inc., is down 4,000 feet.

In Loudin district, this operator is drilling at 3,410 feet on the Kanawha Land Co. lease. On the Kanawha City Co. tract, the Columbian Carbon Co. is drilling at 2,700 feet. In Jefferson district, Benedum and Trees reached 5,700 feet in the test on the Joseph Hill farm without reporting additional oil.

In Gilmer County, West Virginia Production Co. has completed a rig for No. 5 on the J. J. Gerwig farm in Center district. Here, the Hope Construction & Refining Co. is down 2,486 feet on the K. C. Simmons farm. In DeKalb district, J. W. Cunningham and others have reached 1,641 feet on the Lee and Ola Gainer farm.

WILDCAT OPERATIONS

OKLAHOMA WILDCATS

Week Ending August 10

NORTHERN OKLAHOMA

Alfalfa County

Tex-O-Kan Oil Co.'s No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft. Plugged back with 225 sacks cement, S.D. for water.

Beckham County

R. L. Martin et al's No. 1 Robertson, C NE SE Sec. 1-9-22w.
Spudded and S.D.

Star Oil Co.'s No. 1 Blair, C NW SE Sec. 15-9-24w.
Rig and tools.

Blaine County

Earl Ingraham et al's No. 1 Masters, SW NW NW Sec. 27-16-11w.
S.D. 1,340 ft.

Caddo County

Denver Prod. & Ref. Co.'s No. 1 Sah-Can, C SE SE Sec. 33-10-10w.
Lost circulation at 8,330 ft.; running Schlumberger test.

H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 3-6-13w.
S.D. for orders at 2,506 ft.

F. A. Turner et al's No 1 Spain, NE NE SW Sec. 1-5-11w.
Broken sand 2,669-81 ft.; dry; fishing for 800 ft. of drill pipe; T.D. 2,802 ft.

Cleveland County

Arab Pet. Co.'s No. 1 McKiddy, SE SE NW Sec. 16-7-1.
Drlg. 5,101 ft.

Hall-Briscoe, Inc.'s No. 1 Fant, SW SW NE Sec. 27-10-2w.
Drlg. below 4,600 ft.

Coal County

Amerada Pet. Corp. and Stanolind Oil & Gas Co.'s No. 1 Traveler' Life, SW NW SE Sec. 28-1s-9e.
Asphalt 4,780-4,810 and 4,825-85 ft.; drlg. 5,070 ft. in limestone; hole full water 5,120 ft.

Carter Oil Co. et al's No. 1 Thompson, C S½ NE NW Sec. 34-2-9.
Base of lime 4,530 ft.; drlg. 4,870 ft.

Comanche County

Oscar Jones' No. 1-A Sheets, NE SW Sec. 26-3-10w.
Machine.

Garvin County

Charles Carter and W. S. Key, Inc.'s No. 1 Wood NW SW SE Sec. 5-4-3e.
S.D. 2,405 ft.

Grant County

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-8w.
T.D. 6,502 ft. contract depth; S.D.

Shell Pet. Corp.'s No. 1 Foster, NW SE Sec. 30-27-8w.
Set 15-in. casing 250 ft.

Wentz Oil Corp. et al's No. 1 Wirtz (Community), SE SE NW Sec. 32-28-4w.
Coring 3,340 ft.

Yingling et al's No. 1 Allen, SW SE Sec. 36-26-4w.
Location.

Greer County

H. N. Payne et al's No. 1 Tressell, NW cor. Sec. 1-7-22w.
T.D. 1,785 ft.; U.R. 8-in. csg.; to deepen. Cleaning out.

Harmon County

King & Hutchinson's No. 1 Hollis, 315 ft. from N and 315 ft. from W lines of SW Sec. 29-2-25w.
Location.

J. J. Mathis' No. 1 Keith, NE NW SW Sec. 12-5-24w.
Machine on ground.

Hughes County

Caprock Oil Co.'s No. 1 Parks, SW SW SE Sec. 34-7-8.
Rigging up (correction).

Freeman et al's No. 1 Kite, NW NW NE Sec. 8-6-10.
Top sand 700 ft.; show oil; S.D.

Earl Sadler's No. 1 Scott, NW cor. Sec. 23-7-9.
Drlg. 665 ft.

Texas Co.'s No. 1 Keaton, NW SW Sec. 4-8-10.
Set 8-in. csg. 3,950 ft.

Kay County

J. T. Lindsay's No. 1 Waggoner, NW NW NE Sec. 3-27-1.
Oswego 3,380 ft.; drlg. 3,710 ft.

Lewis Prod. Co.'s No. 1 Hollenbeck, SE NE SE Sec. 18-27-2.
Rigging up.

Marshall, Haddock et al's No. 1 Hermes, SW SW NW Sec. 6-26-4.
Drlg. 1,740 ft.

Robinson Drlg. Co.'s No. 1 Hermes, SW SW NW Sec. 6-26-4.
S.D. 1,690 ft.

Kiowa County

Rajah Oil Co.'s No. 3 Stone, C SE NE Sec. 24-7-17w.
Sulphur wtr. 1,390-1,430 ft.; T.D. 1,476 ft.

Latimer County

McCraw et al's No. 1 Tidwell, C NW SE Sec. 17-3-22.
Drlg. 101 ft.

Lincoln County

W. N. Anthony's No. 1 Fruin-Eckman, SE SE SW Sec. 4-16-1e.
Rigging up standard tools; T.D. 5,181 ft.

Chester L. Carlock's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Spudded and S.D.

Chas. Ralph's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Spudded and S.D.

Stanolind O. & G. Co. and Amerada Pet. Corp.'s No. 1 Connelly, SE NE SE Sec. 23-14-2.
Drlg. 3,964 ft.

Texas Co.'s No. 1 Niccum, SE SW NW Sec. 28-14-5.
Mayes 4,290 ft.; Sycamore 4,585 ft.; T.D. 4,655 ft.; 3,000 ft. water in hole. Will drill to Wilcox.

Logan County

Anderson-Kerr et al's No. 1 Goodium, NE cor. Sec. 15-15-3w.
Drlg. 2,500 ft.

Olson Drlg. Co., Anderson-Prichard and Frank Buttram's No. 1 Cavalt, NW SW SE Sec. 22-16-3w.
Drlg. 250 ft.

Sinclair Prairie and Slick-Urschel's No. 1 Koatsch, SW cor. Sec. 23-15-3w.
Shut in for tanks.

Stanolind O. & G. Co., Amerada Pet. Corp. and Eason O. & R. Co.'s No. 1 Gragg, SW SW NE Sec. 20-18-4w.
Drlg. 4,432 ft.

Texas Co. et al's No. 1 Wood, SW SW NE Sec. 34-15-4w.
Drlg. 4,310 ft.

Major County

Indian Territory Illuminating Oil Co. and Continental Oil Co.'s No. 1 Fairview, 700 ft. from S and 670 ft. from W lines of SE¼ Sec. 32-22-14w.
Oswego 6,438 ft.; drlg. 6,882 ft.

Noble County

Atlantic Oil Prod. Co. et al's No. 1 Strom, 640 ft. S & W NE cor. SE¼ Sec. 8-20-1w.
Drlg. 3,650 ft.

Okfuskee County

Sunray Oil Co.'s No. 1 Culla, NE SW NE Sec. 13-12-8.
Drlg. 1,100 ft.

Oklahoma County

Gypsy Oil Co. and Indian Territory Illuminating Oil Co.'s No. 1 Salisbury, NW NE NE Sec. 13-14-4w.
Cored 6,649½-72 ft. Recovered 4½ ft. oil stain and gas odor.

Sinclair Prairie O. & G. Co.'s No. 1 Corbett, NE NW NE Sec. 17-13-2w.
Wilcox sand 6,645-6,706 ft., T.D.; flowed 485 bbls. of oil, 27% wtr., 2% b.s.; cored 6,706-10½ ft. No recovery.

Osage County

J. A. Freeberg et al's No. 1, NE cor. SE Sec. 1-25-6.
Drlg. 850 ft.

Payne County

Amerada-Stanolind et al's No. 1 Friedman, SE cor. Sec. 28-19-3.
Simpson dolomite 4,289 ft.; sand 4,301-05 ft.; flowed 660 bbls. first day; 560 bbls. second day, 1% wtr.; shut in for pipe line.

Pawnee County

Stanolind O. & G. Co.'s No. 1 Shunatana, NE SW SE Sec. 32-22-8.
Oswego 3,485 ft.; fishing at 3,624 ft.; whipstock at 3,600 ft.; P.B. to 3,546 ft. and drlg. by at 3,445 ft.

Pontotoc County

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-3-6.
S.D. 2,920 ft.

Philip Boyle's No. 1 McCracken, NE NW NW Sec. 21-5-4.
T.D. 2,173 ft.; plugged back to 2,167 ft.; pumped salt water with show of oil.

Charles E. Carter's No. 1 Wood, NW SW SE Sec. 5-4-1.
S.D. 2,405 ft.

Clark & Cowden's No. 1 Reynolds-Wagner, SE NW SE Sec. 17-2-7.
Location.

Continental Oil Co.'s No. 1 McCarty, C SE NW Sec. 12-1-7e.
Drlg. 2,430 ft. (correction).

Crabb-Craw Oil Co.'s No. 1-A Bruce, SE NE SW Sec. 3-4-6.
Sand 1,106-18 ft.; pumped 10 bbls. in 24 hrs.; S.D.

W. A. Delaney et al's No. 1 Fulsome, SE NE Sec. 35-4-6.
Location.

Franks Bros.' No. 1 Abbott, SW NW NE Sec. 34-3-6.
Rig.

Gillette & Kroeger's No. 1 Duver, NW NW SE Sec. 36-1n-6e.
T.D. 1,325 ft.; S.D.

McBride Inc. et al's No. 1 Copeland, SE NW Sec. 31-4-5.
Location.

Southern Oil Co.'s No. 1 Perry, SW SW NW Sec. 11-4-6.
Rig on ground.

Leonard Williams et al's No. 1 Breedon, NW cor. Sec. 6-2-5.
Spudded, rigging up standard tools.

Pottawatomie County

Paul Traugh et al No. 1 Lowry, near C NE SE NE Sec 30-4-5.
Broken sand 2,415-46 ft.; solid sand 2,-446-61 ft.; T.D. 2,463 ft.; flowed 105 bbls. in 2 hrs.; pumped 55 bbls. in 8 hrs.

Seminole County

Carter Oil Co. and Shell Petroleum Corp.'s No. 1 Brown, C W½ SE SW Sec. 23-8-5.
Wilcox sand 4,408-30 ft., T.D.; dry; P.B. to 4,185 ft.; acidized Hunton; swbd. dry; S.D.

L. Cooper's No. 1 Chandler, NE SE SW Sec. 4-5-6.
S.D. 1,780 ft.

Ray Dorris and J. T. Hall's No. 1 Dorris, SE SE SW Sec. 31-10-7.
Sand 520-60 ft.; H.F.W.; S.D. 608 ft.

Scott & Smith's No. 1 Abb, SE NW SE Sec. 4-6-6.
S.D. 2,134 ft.; R.U. standard tools.

Van Deventer et al's No. 1-A Bender, NE NE SW Sec. 2-8-8.
Broken sand 3,162-68 ft. and sand at 3,168-72 ft T.D.; 1,500 ft. oil in hole; U.R. 6-in. csg.

Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
Drlg. 2,895 ft.

Tom Phillips et al's No. 1 Abbott, NE cor. Sec. 33-8-7.
Wilcox 4,339-51 ft., dry; P.B. to 3,193 ft.; swbd. and flowed 225 bbls. in 4 days; from Booch sand 3,040-80 ft.; pumped 60 bbls. in 24 hrs.; completed.

Texas County

Cabot Carbon Co.'s No. 1 Jackson, C NW Sec. 7-3n-15ɔ (Cimarron Meridian).
Drlg. at 4,020 ft.

Washita County

Okla-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
H.F.W. 2,710-17 ft., T.D.

L. P. McWhirter's No. 1 fee, SW cor. Sec. 34-8n-19w.
T.D. 1,003 ft.; S.D. for repairs.

SOUTHERN OKLAHOMA

Atoka County

L. O. Garner et al's No. 1 Garner, C NE NW NE Sec. 27-1n-15 (800-ft. test).
Machine.

Keaton et al's No. 1-A Roland, NE cor. NW NE NE Sec. 16-3s-10e.
T.D. 850 ft. (corrected); lime at 800-47 ft.; will treat.

Malarnee et al's No. 2 D.O.K. land, C SE SE Sec. 35-2s-13.
Drlg. 3,206 ft.

Mid-Continent Petr. Corp. et al's No. 1 Fulton, SW cor. Sec. 19-1s-12e.
Drlg. 1,837 ft.

R. H. Pierce et al's No. 1 Aetna Life Ins. Co., NW SW NE Sec. 10-1n-12e.
Recmtd. 12¼-in. pipe 941 ft.; T.D. 985 ft.

Vierson et al's No. 1 Williams, NE SW NW Sec. 34-2s-10.
Drlg. 1,999 ft.

Atoka County

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft.; cleaning out.

Bryan County

Welch Oil Corp.'s No. 1 Collins, NE NE Sec. 19-8s-8e.
S.D. 825 ft.

J. D. Parks' No. 1 Coats, SE NE SW Sec. 1-5s-8e.
T.D. 225 ft.; S.D.

H. B. Smith et al's No. 1 Henry, C NW NE Sec. 16-8s-7e.
Rig (4,500 ft. test).

Trio Oil Co.'s No. 1 Gilbert, SW NE SW Sec. 25-8s-7.
Set pipe 896 ft.

Carter County

Waco Turner's No. 1 Munson, NE NW NE Sec. 35-5s-2w.
S.D. for water, 4,765 ft.

Carter Oil Co.'s No. 1 Carter-Williams, SW NE SW Sec. 27-2s-3w (7,000-ft. test).
Drlg. 6,776 ft.

Choctaw County

E. B. Abernathy's No. 1 Christian, 400 ft. N and 1,245 ft. W of SE cor. Sec. 1-6s-19e.
Dry and abd. 585 ft.

Rhodes et al's No. 1 Possumik Savings Bank, SE cor. Sec. 1-5s-17.
Black lime 340-52 ft.; sand 452 ft.; drlg. 550 ft.; no showing.

Jackson County

Associated Oil Co.'s No. 1 Harrell, NE NE SE Sec. 13-1s-21w.
S.D. 875 ft.; cleaning out.

Dengall Oil & Gas Co.'s No. 1 Robinson, SE SE NE Sec. 32-1s-22w.
Granite wash 2,890-92 ft.; showing of oil; drlg. 3,050 ft.

Gypsy Oil Co.'s No. 1 Boucher, NW SW SW Sec. 32-1-19w.
Fishing for tools; T.D. 2,340 ft.

Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,722 ft.; S.D.

Marshall & Burnham's No. 1 Hess, NE SW NE Sec. 27-1s-20w.
T.D. (corrected) 1,160 ft.; S.D.

Palo Duro Oil Co.'s No. 1 Ealum, SW SW SW Sec. 16-2-21w.
S.D. 2,505 ft.

Triangle Oil Co.'s No. 1 Fox, E½ W½ NW Sec. 11-3n-20w.
S.D. 632 ft.

Jefferson County

Gypsy Oil Co.'s No. 1 James, SW SE SE Sec. 30-2s-6w.
S.D. 2,102 ft.

G. W. Howell et al's No. 1 Currey, SE SE SW Sec. 36-4s-9w.
T.D. 1,347 ft.; S.D.

Johnston County

W. A. Delaney et al's No. 1 Diamond, NW NE SE Sec. 5-1s-8.
Drlg. 2,100 ft.

M. A. Neff and R. A. Godfrey's No. 1 Ford, NE SE NW Sec. 13-4s-5.
Drlg. 57 ft.

Schermerhorn Oil Co.'s No. 1 Rich, SW SE SE Sec. 35-4s-4e.
Drlg. green shale at 969 ft.

Love County

Sinclair Prairie Oil Co.'s No. 1 Stockton, SE SE SW Sec. 26-6s-2w (5,000 ft. test).
S.D. for water, 3,032 ft.

Marshall County

Jess Cook et al's No. 1 May, NE NW Sec. 12-8s-5.
Drlg. 75 ft.

Neff & Godfrey's No. 2 Ruthford, 790 ft. N and 580 ft. W of C Sec. 13-4s-5e.
T.D. 93 ft., S.D.

Norman Smith's No. 1 Chestnut, NE cor. Sec. 23-8s-5e.
S.D. 275 ft. for 10-in. casing.

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
Top Sylvan shale 5,405 ft.; T.D. 5,461 ft.; S.D.

Murray County

Equitable O. & G. Co.'s No. 1 Ferguson, NE NE SW Sec. 36-1s-3.
Oil Creek sand 1,910-2,092 ft.; flowing fresh water.

Pushmataha County

C. W. Whitehead et al's No. 1 Misser, SE SW SW Sec. 35-3s-13e.
Drlg. 3,430 ft.

Stephens County

Geo. Pace et al's No. 1-A Damron, SE SE SW Sec. 25-2s-6w.
Location.

Prince Bros.' No. 1-A Williams, C SW SE Sec. 19-2-3w.
R.U. and S.D.

Tillman County

J. B. Connelly's No. 1 McCord, NW SE NE Sec. 15-1-17w.
T.D. 300 ft.; cleaning out at 250 ft.

Loper et al's No. 1 Conrad, NE cor. Sec. 35-1s-19w.
Drlg. in brown shale 1,660 ft.

KANSAS WILDCATS

Week Ending August 10

(Descriptions are East unless marked otherwise)

Barber County

Southern Drlg. Co. et al's No. 1 Davis, 330 ft. from W and 330 ft. from S lines of NE Sec. 13-34-15w.
Viola 5,215 ft.; at 5,275 ft., 1,000,000-ft. gas show and spray of oil; acidized; 400 ft. oil in hole.

L. H. Wentz' No. 1 Skinner, SE NW NW NE Sec. 29-31-14w.
Drlg. 4,180 ft.

Barton County

Continental Oil Co.'s No. 1 Klug, C N half N half NE Sec. 18-17-12w.
Bldg. rig.

Lario O. & G. Co. et al's No. 1 Peter, NW cor. Sec. 24-20-11w.
Rigged up.

Palmer Oil Corp.'s No. 1 Morris, SE NW NE Sec. 6-19-15w.
Drlg. 2,465 ft.

C. L. Price et al's No. 1 Ehrlich, NW NW SE Sec. 10-16-13w.
Drlg. 2,690 ft.

Suppes & Witt's No. 1 Hayes, NW cor. Sec. 7-16-15w.
Drlg. 2,815 ft.

Torrey & Feaster's No. 1 Feist, NE NE SE Sec. 29-18-11w.
S.D. 2,215 ft.

Butler County

Polhamus et al's No. 2 Semisch, C S½ NE NE Sec. 5-28-7.
Sand 2,721-58 ft.; pumped 20 bbls. oil, 2 bbls. wtr. in 12 hrs.; shot with 20 qts.
Cleaning out.

Western Kansas O. & R. Co.'s No. 1 King & Marshall, NW NW SW Sec. 11-28-6.
Drlg. 2,358 ft.

Clark County

Watchorn Pet. Co.'s No. 1 Stevens, NW NE NW Sec. 21-33-21w (old T.D. 4,-290 ft.).
Cleaning out to deepen.

Cowley County

Baden, Johnson, Roth & Faurot's No. 1 David, NE SW Sec. 35-30-4.
Drlg. 2,940 ft.

Lloyd, Frost & Study's No. 1 Weathered, SW SE SE Sec. 28-31-3.
Siliceous lime 3,339 ft.; pumped 92 bbls. of oil and 47 bbls. of wtr. in 17 hrs.; H.F.W. 3,405 ft.; P.B. 3,349 ft.; pumped 550 bbls. oil and 70 bbls. wtr.

Murfin & Stewart's No. 1 Newton, SE SE SE Sec. 21-30-2.
Rig.

Wakefield et al's No. 1 Auman, SE SE NE Sec. 32-33-3.
Drlg. 1,160 ft.

Dickinson County

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
Hunton 2,808 ft.; H.F.W. 2,812 ft.; S.D. 3,036 ft.

Ellis County

Ellis County Oil Co.'s No. 1 Freis, near C SE SE NW Sec. 10-12-20w.
Moving in material.

Helmerich & Payne et al's No. 1 Kuhn, C NE quarter Sec. 16-14-20w.
Running 5-in. liner 3,746 ft.

Tom Palmer and Storm King Oil Co.'s No. 1 Ruder, SE SE NW Sec. 17-15-18w.
Pumped 206 bbls. 11 hrs. acidized; potential 499 bbls. 24 hrs.; pay 3,422-25 ft.

L. Roark et al's No. 1 Bemis, SE cor. Sec. 16-11-17w.
U.R. 12-in. csg. to 770 ft.

L. Roark et al's No. 1 Bemis, SE SE SE Sec. 16-11-17w.
Drlg. 340 ft.

Ellsworth County

Franco Central et al's No. 1 Frevert, SW cor. Sec. 8-17-10w.
Drlg. 1,340 ft.

Keith et al's No. 1 Schepman, SW SW NW Sec. 22-17-10w.
Moving in material.

Lario O. & G. Co.'s No. 1 State, SW SW SW Sec. 29-15s-8w.
T.D. 3,937 ft.; P.B. 2,525 ft.; fishing.

Graham County

Cusco Oil Co.'s No. 1 Kaufman, C NE NE Sec. 18-6-24w.
Rotary rig.

Helmerich & Payne et al's No. 1 Stites, C SW SW Sec. 8-10-22w.
Drlg. plug; rainbow of oil, 1½ bbls. water 3,872 ft.; cleaning out.

Vickers Pet. Co. & Phillips Pet. Co.'s No. 1 Hutton, 430 ft. W and 330 ft. S of NE SE Sec. 29-8-22w.
Rigging up.

Harper County

Kessler, Thier et al's No. 1 Wolfje, SW SW NE Sec. 17-33-6w.
Drlg. 4,840 ft.

Harvey County

Goering Bros.' No. 1 Brainard, NE SW Sec. 3-23-2w.
Drlg. 2,150 ft.

H. H. & S. Oil Co.'s No. 1 Frizzle, NE NE SE Sec. 31-23-2w.
Dry and abd. 3,747 ft.

Hartman & Blair et al's No. 1 Redinger, NW cor. Sec. 15-24-3w.
Fishing 3,045 ft.

Winkler Koch et al's No. 1 Mueller, SE SW NW Sec. 15-23-2w.
Hunton 3,670-3,700 ft.; dry and abd.

Kingman County

Derby et al's No. 1 Bartholomew, SW NW NW Sec. 8-27-4w.
Set 6-in. csg. 4,016 ft.; cored to 4,027 ft.; standardizing.

McPherson County

Carey & Miller's No. 1 Husband, SE SE NW Sec. 6-19-3w.
S.D. 2,000 ft.

Hollow, Toews & Hinkle's No. 1 Aschman, NW NW SE Sec. 8-21-4w.
Drlg. 2,832 ft.

Shell Pet. Corp.'s No. 1 Wenger, NE cor. Sec. 2-20-1w.
Simpson 3,396 ft. Siliceous 3,467-70 ft.; 2,400 ft. of water in hole; abandoned.

Osage County

Jim Edwards' No. 1 Detrick, C NW SE Sec. 21-14-15.
Show oil and gas 782-800 ft.; T.D. 800 ft.; shut down 5-8-35.

Reno County

Allison & Fitzwilliams' No. 1 Dukelow, NE NE NE Sec. 11-22-6w.
S.D. 2,895 ft.

Anderson & Kerr et al No. 1 Davies, NE cor. Sec. 28-23-7w.
Dry and abd. 4,119 ft.

Haynes Bros.' No. 1 Mueller, SE SE NW Sec. 30-24-4w.
Hunton 3,690-3,701 ft.; hole full fluid, mostly water; U.R. 5-in. csg.

Shell Pet. Corp.'s No. 1 Reese, center W½ W½ SW¼ Sec. 11-24-9w.
Coring 1,965 ft.

Stanolind & Amerada's No. 1 J. J. Hilger A, NE NE SW Sec. 21-26-4w.
Drlg. 2,110 ft.

Rice County

Aylward et al's No. 1 Rickard, SW SW NW Sec. 22-18-9w.
Drlg. 2,790 ft.

Detrick et al's No. 1 Conner, C NE NE Sec. 28-19-7w.
Spudded and S.D.

Detrick et al's No. 1 Monroe, C NE NE Sec. 9-20-7w.
Spudded & S.D.

L. E. Douglas and Hutchinson O. & G. Co.'s No. 1 Hammell, NE NE NE Sec. 16-19-10w.
Rigging up.

Three Rivers Oil Co.'s No. 1 Buehler, NW NW NW Sec. 17-18-8w.
K.C. lime 2,895 ft.; show of gas 2,910 ft.; showing of oil 2,913 ft. T.D.

Rooks County

El Dorado Refining Co.'s No. 1 Marshall, C SE SE Sec. 8-7-17w.
S.D. 255 ft.

F. A. Gillespie & Sons' No. 1 Low, NE NE NW Sec. 12-6-18w.
Moving in material.

Murfin et al's No. 1 Wasthusin, NE NE SE Sec. 19-9-16w.
Rigging up.

Lario O. & G. Co. et al's No. 1 Fisher, NE cor. Sec. 22-10-18w.
Drlg. 245 ft.

Smith & Ash's No. 1 Nelson, NW NW NE Sec. 27-10-16w.
Drlg. 3,393 ft.

Trees Oil Co. and Findeiss' No. 1 Johnson, SW SW SE Sec. 26-10-19w.
Drlg. 2,885 ft.

Rush County

Boyle & Grosman et al's No. 1 Yost, C SW SW Sec. 28-17-18w.
Granite Wash 3,700 ft.; H.F.W. 3,719-22 ft.; drlg. 3,745 ft.

E. L. Byers et al's No. 1 Ewing, C W half W half SW Sec.
Bldg. rig.

Darby Pet. Co.'s No. 1 Jacobs, SW SW NW Sec. 3-16-18w.
Location.

Gypsy Oil Co.'s No. 1 Kraisinger, SE NE SE Sec. 23-18-17w.
Drlg. 2,440 ft.

Lario O. & G. Co. et al's No. 1 Gillig, NE SE NW Sec. 24-17-17w.
Granite 3,547-58 ft. T.D.; dry and abd.

Ramsey Pet. Co. et al's No. 1 Darkes, SW SW NW Sec. 5-17-20w.
K.C. lime 3,568 ft.; 600 ft. water in 3 hrs.; U.R. 6-in. to 3,618 ft.

Twin Drlg. Co. et al's No. 1 Appl, SW SW NE Sec. 29-17-17w.
Ran 10-in. csg. to 2,485 ft.; drlg. 2,506 ft.

Russell County

J. Brouk and R. D. Bailey's No. 1 Kleusner, NW NW SE Sec. 34-15-12w.
Dodge 2,920-35 ft.; U.R. 6-in. csg. 2,975 ft.

Buffalo Oil Co.'s No. 1 Kunz, NE NE SW Sec. 19-14-15w.
Cellar and material.

Coralena Oil Co.'s No. 1 Berrick, NE NW NE Sec. 6-15-13w.
Cellar.

Coralena Oil Co.'s No. 1 Fiegler, SE SE NE Sec. 11-15-14w.
Pumped 2 bbls. oil per hr. at 2,450-55 ft.

Finney et al's No. 1 Chenowath, SW SW SW Sec. 10-15-13w.
Cellar.

Hartman & Blair's No. 1 Claussen, SE NE SW Sec. 34-13-14w.
Rig.

Hartman & Blair's No. 1 Mills, SE SE SW Sec. 27-13-15w.
Drlg. 1,085 ft.

L. W. Murfin's No. 1 Moore, NW NW SW Sec. 15-13-12w.
Location abandoned.

Murfin et al's No. 1 Gorham estate, NE NE SE Sec. 29-14-15w.
Cellar.

Nassau Oil Corp.'s No. 1 Karst, NW SW NE Sec. 27-15-14w.
Drlg. 1,825 ft.

Pryor and Lockhart's No. 1 Spicer, NE NE SE Sec. 21-11-15w.
Show of oil 2,805-10 and 2,875-80 ft.; hole full water 2,900-08 ft.

P. G. Reynold's No. 1 Frederickson, 330 ft. from S and 1,060 ft. from W lines SE¼ Sec. 6-13-12w.
Cellar.

Roth & Faurot's No. 1 Shaffer, C NW NE Sec. 31-13-12w.
Drlg. 2,205 ft.

Stearns & Streeter's No. 1 Dreiling, SW SW SW Sec. 8-13-15w.
Drlg. 1,815 ft.

Vernon & Murphin's No. 1 Becker, NE cor. Sec. 32-15-14w.
Oswald 3,144 ft.; drlg. 3,262 ft.

A. E. Seely et al's No. 1 Herman, SE NW Sec. 27-12-15w.
Top Oswald 3,030 ft.; drlg. 3,230 ft.

Sedgwick County

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-2w.
U.R. 6-in. csg. to 3,703 ft.

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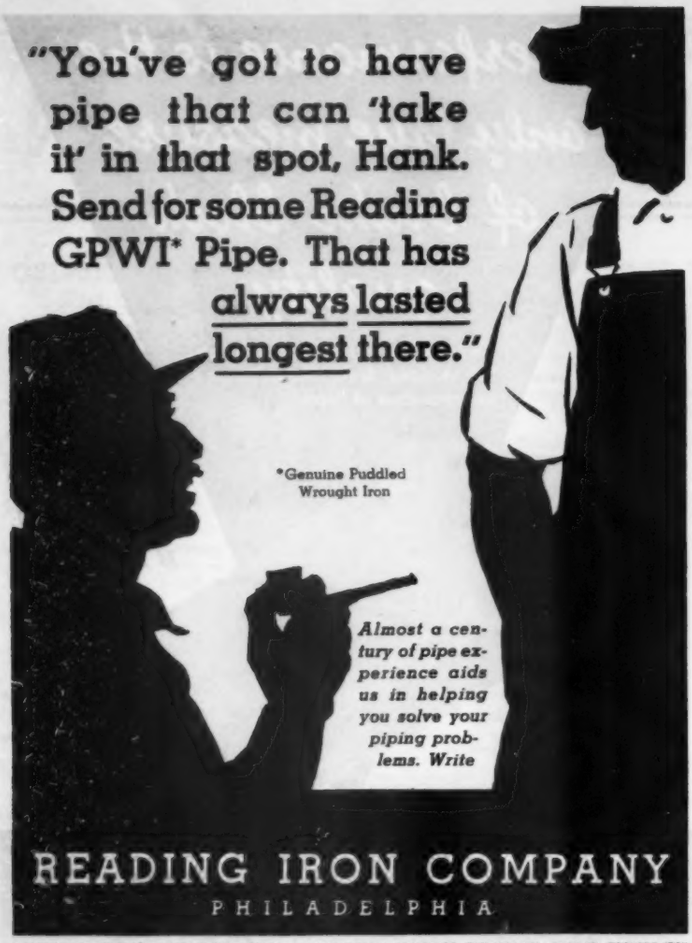
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Dickey Oil Co. et al's No. 1 Chase, SE cor. Section 11-27-2.
Drlg. 2,300 ft.

Stafford County

Atlantic Oil Prod. Co. and Phillips Pet. Co.'s No. 1 Cornwall, C NE SW Sec. 4-25-13w.
Rig.

C. B. Davis et al's No. 1 Riley, SE cor. Sec. 19-22-11w.
Siliceous lime 3,589-3-606 ft.; T.D. 5,630 ft.; pumped 185 bbls. oil & 17 bbls. wtr.; completed.

Empire O. & R. Co.'s No. 1 Grove, NE NE NW Sec. 5-22-11w.
K.C. lime 3,142 ft.; Conglomerate 3,403 ft.; ran 6-in. csg. to 3,460 ft.

Rose-Spring Drlg. Co.'s No. 1 Toland, NW NW SW Sec 2-25-14w.
Rig.

Sumner County

Allison & Fitzwilliams et al's No. 1-B Hitchcock, SW SW NE Sec. 16-30-1w; S.D. 3,450 ft.

D. J. Wilson et al's No. 1 Clark, 1,320 ft from W and 25 ft. from S line of NW Sec. 15-35-1w.
Drlg. 1,307 ft.

Winkler & Koch et al's No. 1 Belsley, SW SW NW Sec. 2-32-2w.
Drlg. 2,465 ft.

Trego County

Central Commercial's No. 1 Wagg. NW NW SE Sec. 17-13-21w.
Fishing at 1,600 ft.

Hansa & Lauck and Olson Drlg. Co.'s No. 1 Lang, SE SE NW Sec. 1-14-21w.
T.D. 3,645 ft.; pulling 6-in. csg.

Vickers et al's No. 1 Secor, NW NW NW Sec. 25-15-24w.
Drlg. 3,126 ft.

Woodson County

Connell & Marshall's No. 1 Klick, SW NW SW Sec. 20-25-14.
Sand 1,390-1,403 ft.; T.D.1,437 ft.; shot with 120 qts.; flowed 5 bbls. oil per hr.; pinched in.

Saco Oil Co.'s No. 1-A Hassenpflug, SW NW NE Sec. 34-25-14.
Drlg. 100 ft.

GULF COAST WILDCATS

Week Ending August 10

Raccoon Bend—Austin County

Humble O. & R. Co.'s No. 3 H. F. Granen. 682 ft. NE of No. 1, 150 ft. SE of NW¼ of 62.8-ac. tract, Smeathers Sur.
Location.

Humble O. & R. Co.'s No. 7-X McCasland, 190 ft. NW line, 168 ft. SE line of Smeathers & White Sur.
Location.

Humble O. & R. Co.s No. 9-X Bellville, 1,663 ft. along most northerly SW line, 750 ft. of most northerly SW line from 8-X, in Wm. C. White Sur.
T.D. 4,330 ft.; P.B. 3,172 ft.; 7-in. csg. 3,145 ft.

Danbury—Brazoria County

Turnbull & Irwin's No. 1 Blakely, Sec. 14, H.T.&B. Sur.
Drlg. shale and lime 5,146 ft.

Hastings—Brazoria County

Humble O. & R. Co.'s No. 1 J. F. Bridges, center of N 10 acres of 20-ac. lease, A. C.H.&B. Sur. No. 2.
Location.

Humble O. & R. Co.'s No. 2 J. F. Bridges, center of S 10 acres of 20-ac. lease, A. C.H.&B. Sur. No. 2.
Location.

Humble O. & R. Co.'s No. 1 J. C. Johnson, center of 10-ac. lease, A.C.H.&B. Sur. No. 2.
Drlg. shale 2,509 ft.

Stanolind O. & G. Co.'s No. 2 W. H. Avitts, 330 ft. from E line, 119 ft. from S line, 765 ft. S of No. 1 A.C.H.&B. Sur. No. 1.
10¾-in. csg. 2,064 ft.; T.D. 2,137 ft.

Stanolind O. & G. Co.'s No. 3 Grate, 608 ft. N, 764 ft. W of SE cor. of 71.6-ac. tract, A.C.H.&B. Sur. No. 2.
Derrick.

Stanolind O. & G. Co.'s No. 3 W. B. Wooster, 330 ft. NW of road, 330 ft. from S line of A.C.H.&B. Sur. No. 1.
Drlg. shale 1,840 ft.

Stanolind Oil & Gas Co.'s No. 1-A, W. H. Avitts, 330 ft. S, 330 ft. W of NE cor. of 45.85-ac. "A" lease, A.C.H.&B. Sur. No. 1.
Drlg. sand 2,810 ft.

Stanolind Oil & Gas Co.'s No. 2 Williams, 330 ft. S, 330 ft. E of the most NW cor. of the Williams $1.13-ac. tract A.C.H. &B. Sur. No. 1.
Drlg. shale 4,420 ft.

Stanolind Oil & Gas Co.'s No. 1 Frank Guido, 330 ft. N, 990 ft. W of SE cor. of Guido 40-ac. tract, H.T.&B. Sur. No. 36.
Drlg. sand 5,410 ft.

Stanolind Oil & Gas Co.'s No. 1 Fannie Drake, 330 ft. N, 990 ft. W of SW corner of 120-ac. tract. H.T.&B. Sur. No. 36.
Drlg. sand 5,524 ft.

Stanolind Oil & Gas Co.'s No. 1 Pennock Estate, 330 ft. N, 990 ft. W of SE cor. of 40-ac. tract, H.T.&B. Sur. No. 36.
Drlg. shale 5,599 ft.

Stanolind Oil & Gas Co.'s No. 1 Laur D. Shaw, 330 ft. S, 330 ft. W of most easterly NE cor. of 120-ac. tract, H.T.&B. Sur. No. 36.
Drlg. shale 5,655 ft.

Stanolind O. & G. Co.'s No. 3 B. L. Turner, 330 ft. at R/A from NW line and 330 ft. from S line of Turner 195-ac. tract, A.C.H.&B. Sur. No. 1.
T.D. 6,100 ft.; 7-in. csg. 5,990 ft.; I.P. 104 bbls. in 8 hrs. on ¼-in. choke.

Stanolind O. & G. Co.'s No. 4 Sneed, 330 ft. S, 330 ft. W of NE cor. of Lot 12, D. M. Jay Subd., on Sneed 325-ac. tract, A.C. H.&B. Sur. No. 2.
Drlg. shale 7,243 ft.

Stanolind O. & G. Co.'s No. 2 E. Grote, 461 ft. at R/A from N line and 1,061.6 ft. at R/A from E line of Grote 71.62-ac. tract, A.C.H.&B. Sur. No. 3.
Reaming to set screen; T.D. 6,100 ft.

Manvel—Brazoria County

Bowles and Barsodi's No. 5 B. E. Norvell Investment Co., 274.5 ft. from S line, 466 ft. from E line of Lot 45, Sec. 33, H.T. &B. Sur.
Location.

Jay Simmons' No. 1 Wilson, center of Lot 25, H.T.&B. Sur. No. 23.
Location.

J. Simmons et al's No. 1 Martens, 31 ft. WE line center of North and South lines. Lot 10.
S.D. 1,120 ft.

J. W. Sorrells' No. 1 Swift, Blk. 21, Abst. 318, H. N. Little Sur.
Derrick.

Texas Co.'s No. 5-H H. J. Wray, 1,650 ft. S, 42 degrees W, and 330 ft. S, 48 degrees 23 ft. E from NE cor. of Lot 20, T. Spraggins Sur.
Rig up.

Texas Co.'s No. 6 Houston Oil Field Assn., 247.5 ft. S, 400 ft. W of NE cor. of Lot 25, A.C.H.&B. Sur., Sec. 91.
Drlg. sand 3,738 ft.

Texas Co.'s No. 12-A Belcher, 770 ft. S, 41 deg. 40 ft. W and 648 ft. S, 47 deg. 50 ft. E from N cor. of lease, H. N. Little Sur.
Sidetracked at 3,685 ft.; 7-in. csg. 3,-779 ft.

Texas Co.'s No. 1 O. W. Halligan, center of Lot 27, H.T.&B. Sur. No. 32.
T.D. 4,014 ft.; 7-inch csg. 3,997 ft.

Texas Co.'s No. 2 O. W. Halligan, center of Lot 26, H.T.&B. Sur. No. 32.
T.D. 4,060 ft., sidetracked and drilled to 4,030 ft.; P.B. to 3,000 ft.; sidetracked 3,145-3,210 ft.

Texas Co.'s No. 16 Houston Oil Fields Assn., 247 ft. S, 440 ft. E from NW cor. of Lot 19, A.C.H.&B. Sur. No. 91.
Drlg. shale 5,733 ft.

Texas Co.'s No. 2 Dawson, 247 ft. S, 241 ft. W of NE cor. of Lot 58, H.T.&B. Sur. No. 23.
Location.

Thompson Drlg. Co.'s No. 2 Exaccastedes, H.T.&B. Sur. No. 23, center N and S lines, 220 ft. E of W line, Lot 39.
Drlg. shale 1,740 ft.

Trumbo Oil Co.'s (J. M. Campbell) No. 1 H. McCauley, 150 ft. each way out of NE cor. of W 5 acres of Lot No. 1, A.C.H.&B. Sur. No. 91.
Location.

Turman Oil Co.'s No. 2 Hart, 40 ft. N, 50 ft. W of No. 1.
T.D. 4,020 ft.; pulled screen and perforated csg.; tested salt wtr. show of oil from 3,980-90 ft.

Turman Oil Co.'s No. 3 Hart, 150 ft. E of W line, 433 ft. S of N line of Lot 8.
Location.

Uscan Oil Co.'s No. 1 France, H.T.&B. Sur. No. 23, 150 ft. W of E line, 490 ft. S of N line, Lot 9.
Drlg. shale 2,300 ft.

Uscan Oil Co.'s No. 1 Ebbert, 247.5 ft. from N line, 247.5 ft. from S line of 10-ac. tract, Sec. 23, H.T.&B. Sur.
Rig up to pump.

Old Ocean—Brazoria County

Harrison & Abercrombie's No. 2 Bernard River, 1,000 ft. N, 54 deg. W, 400 ft. S. 36 deg. W of No. 1, Charles Breen Sur.
T.D. 8,661 ft.; top sand 8,646 ft.; sidetracked hole while reaming; drlg. shale and lime 5,383 ft.

Port Lavaca—Calhoun County

Steinberger Pet. Co.'s No. 3 Shofner, 466 ft. out of SW cor. of 100-ac. lease.
Drlg. shale 2,100 ft.

Tulane Gordon's No. 1 W. A. Shofner, 339.5 ft. from N line, 295 ft. from E line of block, D. Tilley Addn., M. Sanches Sur.
Location.

Anahuac—Chambers County

Gulf Prod. Co.'s No. 1 Knowles, 2,154 ft. SN line, 467 ft. EW line, Sec. 48, H.&T.C. Sur.
Moving in rig.

Humble O. & R. Co.'s No. 3 Clark, 1,403 ft. E of most easterly W line, 2,604 ft. W of No. 1, 466 ft. N of S line, H.T.&C. Sur.
Rig up.

Humble Oil Co.'s No. 1-B Meddleton, 466 ft. out of SE cor. of Sec. 56, H.&T.C. Sur.
10¾-in. csg. 1,518 ft.; T.D. 1,535 ft.

Humble Oil & Refg. Co.'s No. 5 Meddleton, 464 ft. W of E line, 1,339 ft. S of N line of Sec. 58, H.&T.C. Sur.
Location.

Humble Oil & Refg. Co.'s No. 4 Meddleton, 3,085 ft. N of S line, 466 ft. E of W line of Sec. 58, H.&T.C. Survey.
T.D. 7,090 ft.; 7-in. csg. at 7,048 ft.; W.O.C.; I.P. 743 bbls. per day on ¼-in. choke; T.P. 1,120 lbs.; C.P. 1,200 lbs.

Humble O. & R. Co. and Rycade Oil Co.'s No. 1 Engels, 466 ft. out of SE cor. of Sec. 50, H.&T.C. Sur.
10¾-in. csg. at 1,345 ft.; drlg. sdy. shale 3,130 ft.
Drlg. sandy shale 4,784 ft.

Humble O. & R. Co.'s No. 2 Broussard, 2,332 ft. E of W line, 2,332 ft. N of S line of Sec. 43, H.&T.C. Sur.
Location.

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Mason & McCarthy's No. 3 White, 933 ft. W of No. 1, 466 ft. N of S line of James McGahey Sur.
Rig up.

Sun Oil Co.'s No. 1 White, 466 ft. out of NE cor., 466 ft. W of E line, 2,283 ft. S of N line of James McGahey Sur.
10¾-in. 1,102 ft.; T.D. 1,117 ft.

Woodley Pet. Co.'s No. 1 Blanke, 330 ft. NS line, 990 ft. EW line, Sec. 41, H.& T.C. Sur.
Moving in material.

Barbers Hill—Chambers County

Sun Oil Co.'s No. 7 Higgins, 50 ft. S of N line, 50 ft. W of E line.
Drlg. shale 4,288 ft.

Sun Oil Co.'s No. 11 Chambers County, half way between and in line with Nos. 9 and 10.
Drlg. shale 5,263 ft.

Texas Gulf Prod. Co.'s No. 25-B Kirby, 75 ft. S of N line of Kirby "B" Lease, S offset to No. 3 Fitzgerald.
Drlg. shale and lime 5,031 ft.

Yount Lee Oil Co.'s No. 30 Chambers County School Land, 50 ft. N of S line, direct offset to Sun Oil Co.'s No. 11.
Drlg. sand 4,244 ft.

Big Creek—Fort Bend

Trans State Oil Co.'s No. 1 B. J. Wheat, 108 ft. N of S cor. of J. F. Ahlers lease and 88 ft. E at right angles, W. Young Sur.
Top sand 3,422 ft.; coring, 3,428 ft.; no report.

Boling—Fort Bend County

S. A. Brewster's No. 2 H. R. Farmer, James Scott Sur.
Drlg. sand rock 3,709 ft.

Sun Oil Co.'s No. 1 H. R. Farmer, 70 ft. SW line, 187 ft. NW line of 100-ac. tract, J. Scott Sur.
Rig up.

Texas Co.'s No. 13 Anne Taylor, 150 ft. N at R/A of 10-ac. tract, S. F. Austin League.
Rig up.

Orchard—Fort Bend County

Gulf Prod. Co.'s No. 44 Moore, 500 ft. NW of No. 42, Leo Burknapp Sur.
Drlg. rock 1,599 ft.

Gulf Prod. Co.'s No. 43 Moore, 350 ft. E along S line of SW cor. of E.M.&G. Co. Sur. and 740 ft. N at R/A to said line of lease, 350 ft. E of No. 3 Moore.
6,652 ft.; 7-in. csg. 6,584 ft.

Thompson—Fort Bend County

Humble O. & R. Co.'s No. 4-B Grubbels, 786 ft. N of No. 3, 650 ft. SN line, 466 ft. WE line, S. Kennedy Sur.
Rig up.

Humble O. & R. Co.'s No. 3-B Gubbels, 986 ft. N of No. 1, 466 ft. W of E line, S. Kennedy Sur.
T.D. 5,350 ft.; top sand 5,281 ft.; 7-in. csg. at 5,212 ft.; I.P. 16 bbls. per hour on ¼-in. choke; T.P. 520 lbs.; C.P. 540 lbs.

High Island—Galveston County

Yount Lee Oil Co.'s No. 1-B Gordon & Viterbo, 62.5 ft. from E line, 50 ft. from S line of Blk 1, M Dunman Sur.
Drlg. shale 4,740 ft.

Yount-Lee Oil Co.'s No. 48 Cade, 900 ft. SE and 150 ft. NE of SW corner Block 4, Fitzsimmons Survey.
Drlg. 480 ft.

Yount Lee Oil Co.'s No. 3 Maco-Stewart, 202 ft. S of No. 2 Stewart and 122 ft. W of E line of 7.73 acre tract, D. Dunman Survey.
Spudded.

Yount Lee Oil Co.'s No. 1-C Geo. Smith, D. Dunman Sur.
Comp.; no gauge.

Yount Lee Oil Co.'s No. 47 Cade, Fitzsimmons Sur.
Drlg. shale 6,210 ft.

Yount Lee Oil Co.'s No. 46 Cade, 424 ft. SW of No. 35, 424 ft. NW of No. 36, Fitzsimmons Sur.
Testing at 5,360 ft.

Dickinson—Galveston County

Humble O. & R. Co.'s No. 10 J. F. Magale, 500 ft. SW at right angles to projected center line of road along N line of Block 99, San Leon Farm Home tract, 345 ft. at right angles to E line of Lot No. 1, San Leon Farm Home tracts, 213 ft. from E line of J. C. Magale 346.46-ac. tract, A. Edwards Sur.
Rig up.

Humble Oil & Refg. Co.'s No. 6 Maco Stewart, 6,087 ft. S of NE corner, 1,390 ft. W of E line and 1,390 ft. E of W line and 466 ft. N of S line of Stewart 563 acre lease, J. Sellers Survey.
Drlg. 7,714 ft. in shale.

Humble O. & R. Co.'s No. 5-A Stewart, 466 ft. W of E line of Stewart "A" Lease, 5,500 ft. due S of No. 2-A Stewart, John Sellers Sur.
Rig up.

Humble O. & R. Co.'s No. 1 Bayou Development Co., 375 ft. S of N line and midway between E and W lines of Lot No. 7, John Sellers Sur.
Coring shale 7,561 ft.

Humble O. & R. Co.'s No. 1 E. E. Anderson, 375 ft. N of S line, and midway between E and W lines of Lot No. 4, John Sellers Sur.
Moving in rig.

Humble O. & R. Co.'s No. 2-A Maco Stewart, 3,324 ft. S along E line of S bank of Bayou and 566 ft. W of E line at R/A John Sellers Sur.
Drilled to 9,100 ft.; made 94 bbls. in 24 hrs.

Pure Oil Co.'s No. 2 J. W. Shelar, 779 ft. N, 182 ft. W of N. I. Shelar, B.B.B. &C. Sur.
Drlg. shale 6,220 ft.

Stanolind O. & G. Co.'s No. 1 State, 247 varas S of Humble O. & R. Co.'s No. 1 Jones.
Drlg. shale 8,033 ft.

Arriola—Hardin County

Houston Oil Co.'s No. 7-X fee, 660 ft. 30 deg. 30 ft. SE from No. 1-X.
T.D. 3,697 ft.; P.B. to 3,650 ft.

Houston Oil Co.'s No. 8 fee, Arriola Sur.
Coring sand 3,320 ft.

Republic Prod. Co.'s No. 12 fee, 2,599 ft. S of N line, 474 ft. E of W line of E. Arriola Sur.
T.D. 4,135 ft.; I.P. 119 bbls. through ¼-inch choke; T.P. 400 lbs.; C.P. 500 lbs.

Batson—Hardin County

John Deering's No. 1 Conzelman, 2,810 ft. E along N line from NW cor. of H. Numm Sur. and 35 ft. at R/A, W. Donaho Sur.
Drlg. sand and shale 5,750 ft.

John Deering's No. 1 Bullock, 1,000 ft. N, 17 ft. E of middle line of 30-ac. tract, Bullock tract, Dondo Sur.
T.D. 4,294 ft.; hole heaved to 4,944 ft.; S.D.

John Deering's No. 2 Cruse, 200 ft. E and 50 ft. S of No. 1 Cruse, W. Donaho Sur.
Drlg. shale 4,015 ft.

Shell Pet. Corp.'s No. 1 R. O. Jordan Fee, W. Donoho Survey.
T.D. 4,851 ft.; prepare to make drill stem test.

Pierce Junction—Harris County

J. S. Abercrombie's No. 5 John Ritter, 259 ft. SW of No. 4, 1,047 ft. NE along SE line out of SW cor. of 160-ac. tract, thence 93 ft. NW at R/A, Sec. 51, J. Hamilton Sur.
T.D. 4,898 ft.; 7-in. csg. 4,865 ft.; I.P. 25 bbls. per hour through ¼-inch choke; T.P. 725 lbs.

Gulf Prod. Co.'s No. 11 H. C. Cain, 390 ft. from W line, thence 439 ft. at R/A to N line of 130-ac. tract, Jas. Hamilton Sur. No. 98.
Drlg. shale 6,487 ft.

Gulf Prod. Co.'s No. 40 E. R. Taylor, 89.5 ft. along E line of E. R. Taylor's 560-ac. tract from SW cor., south offset to Hamil & Smith's No. 1 Howe.
T.D. 6,543 ft.; sand 6,533 ft.; comp.; no gauge.

W. H. Holland et al's No. 1, I.&G.N.R.R., 330 ft. from S line of Jas. Hamilton Sur.
T.D. 3,983 ft.; 7-inch csg. 3,970 ft.

Rio Bravo Oil Co.'s No. 28 Settegast, 1,010 ft. W and 450 ft. N from most southerly SE corner of "B" Lease, J. Kopmen Sur
Top sand 3,614 ft.; coring oil sand 3,626 ft.

Humble—Harris County

Sun Oil Co.'s No. 85 River, Drlg. sand
Drlg. shale 1,225 ft.

Sun Oil Co.'s No. 30 Bender, 2,393 ft. N, 3,080 ft. W of most northerly SE cor. of lease; B. Adams Sur.
Drlg. shale.

Texas Co.'s No. 49 Stevenson, 500 ft. E, 150 ft. S of NW cor. Lot 6-B, J. B. Stevenson Sur.
Drlg. sand 2,981 ft.

Mykawa—Harris County

Alpha Pet. Co.'s No. 1 Waggenhausen, C of E½ Lot 10, F. J. Rothas Sur.
T.D. 4,681 ft.; P.B. 4,554 ft.; shot pipe and pulled 1,600 feet; P.B. to sidetrack.

Danciger O. & R. Co.'s No. 3 Minnetex, 663 ft. due E of No. 1, thence 150 ft. at R/A, Blk. 254, W. H. Lovett Sur.
T.D. 4,844 ft.; top sand 4,818 ft.; testing.

Flannigan Drlg. Co.'s No. 1 Minnetex, 150 ft. out of NE cor. of Blk. 261, Wm. Lovett Sur.
Spudded.

Sterling Oil & Refg. Co.'s No. 2 Williams, 250 ft. from N and E line of Wm. Lovett Sur.
T.D. 4,659 ft.; running 7-in. csg.; rig up to pump.

West Prod. Co.'s No. 2 Irwin, W. E. Walker Sur.
10¾-in. csg. 1,370 ft.; drlg. shale and lime 3,072 ft.

West Prod. Co.'s No. 2 Oden, Blk. 14, F. J. Rothas Sur.
T.D. 4,540 ft.; 7-inch csg. 4,386 ft.; W. O.C.

West Prod. Co.'s No. 1 W. Lang, John R. Hall Sur., Blk. 7.
T.D. 5,565 ft.; 7-inch csg. 5,555 ft.; tested salt wtr.; P.B. 5,526 ft.

Tomball—Harris County

Humble O. & R. Co.'s No. 1 Handy, 466 ft. at right angles from E line, 466 ft. at right angles from SE line.
10¾-in. csg. 934-44 ft.

Humble O. & R. Co.'s No. 3 Theis, 626 ft. SN line, 553 ft. NW line of 100-ac. tract, Goodrich Sur.
Drlg. 940 ft.

Humble O. & R. Co.'s No. 10 Reid, 1,544 ft. E of W line, 1,200 ft. S of N line, 933 ft. from No. 7, G. Goodrich Sur.
Drlg. sand 3,327 ft.

Humble O. & R. Co.'s No. 2 Faus, 466 ft. from S line, 1,764 ft. from W line of W. Usener Sur.
T.D. 5,556 ft.; top sand 5,552 ft.; 7-in. csg. at 5,549 ft.; I.P. 15 bbls. per hour on ¼-in. choke; T.P. 400 lbs.; C.P. 700 lbs.

Humble O. & R. Co.'s No. 1 Lembarger, 328 ft. NE of SW line, 328 ft. SW of NE line, 363 ft. NW of SE line of 20.24-ac. tract in E. Smith Sur.
T.D. 5,565 ft.; 7-in. csg. 5,555 ft.

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Humble O. & R. Co.'s No. 1-B Weindorf, 466 ft. E of W line, 259 ft. S of N line, G. Goodrich Sur.
T.D. 5,577 ft.; top sand 5,573 ft.; 7-in. csg. 5,577 ft.; W.O.C.; tested salt wtr.; P.B. 5,526 ft.

Humble O. & R. Co.'s No. 3 Scherer, 339 ft. E of easterly W line, 280 ft. W of E line, 532 ft. NW at R/A to N line of J. House Sur.
T.D. 5,625 ft.; top sand 5,605 ft.; 7-in. csg. at 5,622 ft.; W.O.C.; I.P. 17 bbls. per hour on ¼-in. choke; T.P. 525 lbs.; C.P. 550 lbs.

Vanderbilt—Jackson County

Phillips Pet. Co.'s No. 2 Tuney, 330 ft. each way out of E cor. of 64-ac. tract.

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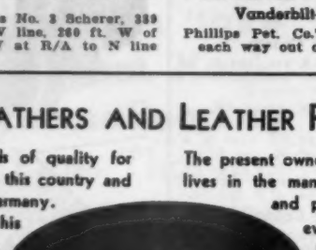

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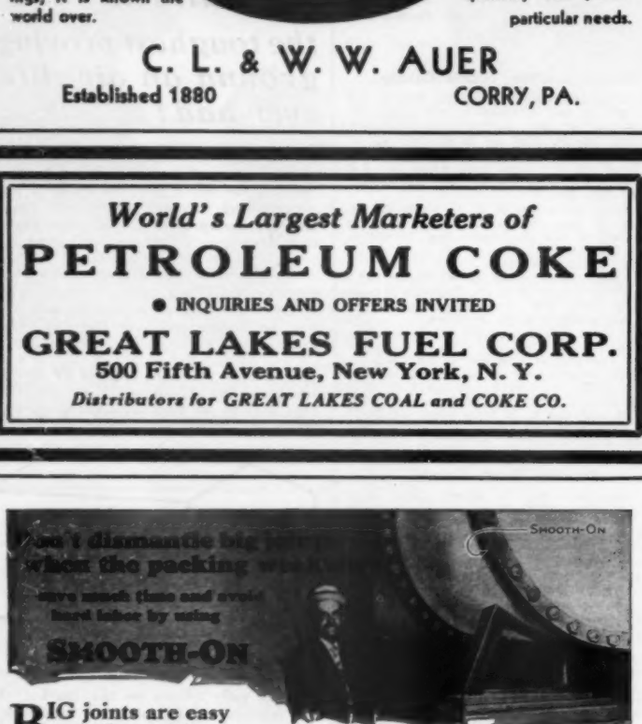

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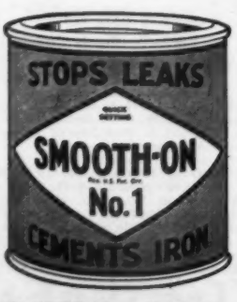

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or 414 ft. SE of No. 1, R. Musquiz Sur.
Drlg. shale 3,350 ft.

Big Hill—Jefferson County

Yount Lee Oil Co.'s No. 1-B Pipkin & Davis, 2,225 ft. from E line and 2,385 ft. from N line of survey, Wm. McFadden Sur.
Drlg. sand and lime 4,969 ft.

Fannett—Jefferson County

J. S. Aber's No. 1 Junker, 50 ft. by 50 ft. out of NW cor. of Junker 430-ac. tract, W. H. Smith League.
Lease expired; abnd.

Gulf Prod. Co.'s No. 5 Junker.
T.D. 5,668 ft.; I.P. 498 bbls. per day.

Cleveland—Liberty County

Black Gold Pet. Oil Corp.'s No. 2 R. D. McDonald, 466 ft. W of most westerly E line and 466 ft. N of most northerly S line of survey, 933 ft. W of Gulf Prod. Co.'s No. 7-C Kirby Lbr. Co., T. Devers Sur.
Derrick.

Gulf Prod. Co.'s No. 10-C Kirby, 2,245 ft. from W line, 2,363 ft. from S line of John Pleasant Survey.
Drlg. sand 1,645 ft.

William J. Colegrove et al's No. 1 State School Land & Dev. Co., 446 ft. from W line and 170 ft. from S line of survey, Clayton Harper Sur.
Location.

Esperson—Liberty County

General Crude's No. 1 Heavaty, 467 ft. out of SE cor. of F. M. Gardner Sur.
Drlg. shale and lime 4,677 ft.

General Crude Oil Co.'s No. 21 Esperson.
Drlg. shale 6,742 ft.

General Crude Oil Co.'s No. 10 Davis, 2,000 ft. from E line, 660 ft. from S line of D. Kokernut Sur.
Cutting out drill stem at 6,950 ft.

Hankamer—Liberty County

Eastman-Ward's No. 1 R. E. Lee, 115 ft. from N line of lease and 76 ft. W of west bank of White Bayou, Geo. Stengler Sur.
Rig up.

Eljean Oil Co.'s No. 1 Thomas, 300 ft. W of E line, 300 ft. SN line, Levi Barrow Sur.
Location.

Eljean Oil Co.'s No. 2 S. E. Ezzell, 130 ft. from N and S line of 10-ac. lease, Levi Barrow Sur.
Coring sand 3,365 ft.

Gulf Prod. Co.'s No. 1-B W. L. Bingle, 159 ft. E along S line of H.&T.C. Sur., thence 378 ft.
Drlg. shale 7,146 ft.

Gulf Prod. Co.'s No. 21 E. W. Boyt, 110 ft. from W line of Amos Allen Sur.
Location.

W. C. Hall's No. 1 Ainsworth, 150 ft. out of NE cor. of 50-ac. tract, Andrew Weaver Sur.
Rig up.

Sterling O. & R. Co.'s No. 1 George Stengler, 100 ft. out of most westerly NE cor. of Geo. Stengler Sur.
Coring shale 2,567 ft.

Will Strozier et al's No. 1 Ezzell, 700 ft. N of S line, 150 ft. W of E line of Levi Barrow Sur.
Derrick.

Wilson Roach Oil Co.'s No. 2 Marrs-McLean, 513.4 ft. from W line, 100 ft. from E line, Levi Barrow Sur.
T.D. 4,207 ft.; I.P. 172 bbls. in 24 hrs.

Hull—Liberty County

Fondren & Snowden's No. 2 Humble-Hooks, 50 ft. from S line, 300 ft. NW of No. 1, J. Devore Sur.
S.D. 892 ft.

Markham—Matagorda County

Hamil & Hamil's No. 3 Hudson, 500 ft. E, 100 ft. S of NW cor., Blk. 15, H. Parker Sur.
Rig up.

Van Vleck—Matagorda County

Skelly Oil Co.'s No. 1 Turner, 523 ft. E from SW cor. of F. Metzler 135-ac. tract, thence 466 ft. S at R/A in Maria Cummins Sur.
Rig up; prepare to spud.

Skelly Oil Co.'s No. 3 Cobb "B," 2,750 ft. from NW line, 2,900 ft. from SW line of M. Cummins Sur.
Drlg. shale 7,743 ft.; oil sand 7,691-7,707 ft.

Conroe—Montgomery County

Humble Oil & Refg. Co.'s No. 2 Bailey, 2,412 ft. E of easterly W line, 622 ft. N of S line, R. Kuykendall Sur.
T.D. 5,149 ft.; prepare to make drill stem test.

Sun Oil Co.'s No. 10 Keystone Mills.
Derrick.

Sun Oil Co.'s No. 16 Keystone Mills.
Drlg. shale 1,350 ft.

Sun Oil Co.'s No. 19 Foster.
Drlg. sand and shale 5,053 ft.

Splendora—Montgomery County

Bryce McCandless et al's No. 1 Texas Long Leaf Lbr. Co., 330 ft. from N and E lines of the W½ of Blk. No. 8, Walker County School Land Sur.
Derrick.

Orange—Orange County

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 39 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur.
S.D. 3,005 ft.

Fort Neches—Orange County

Texas Co.'s No. 5-BA (Polk), 397.5 ft. S. 850 ft. W from most westerly NE cor. of "B" Lease.
T.D. 5,916 ft.; running 7-inch csg.

Texas Co.'s No. 5 Stark, 400 ft. from S and 125 ft. from E line of lease, M. E. Hall Sur.
T.D. 4,381 ft.; P.B. 4,013; running 7-in. csg.

Texas Co.'s No. 4-B Polk, 750 ft. S and 1,450 ft. W from NE cor. of lease, Jacob Beaumont Sur.
Location.

Texas Co.'s No. 6-B Polk, 750 ft. S and 250 ft. W from NE cor. of lease, Jacob Beaumont Sur.
Location.

Livingston—Polk County

Gem Oil Co.'s No. 4 Watt, 660 ft. N of No. 3, 990 ft. from W line of lease, A. Viesca Sur.
Drlg. shale 2,301 ft.

Gem Oil Co.'s No. 6 Davis & Holmes, 653 ft. from W and 662 ft. from N line of survey, A. Viesca Sur.
Rig up.

Hawkeye Pet. Co.'s No. 2 Howard, 365 ft. from E line of lease, 696 ft. N of No. 1, A. Viesca Sur.
Drlg. shale and chalk 4,020 ft.

Humble Oil & Rfg. Co.'s No. 11 Granbury, 932 ft., SE of No. 10, 466 ft.; SW of NE line of Sec. 10, A. Viesca Sur.
T.D. 4,229 ft.; 7-in. csg. 4,220 ft.

Humble Oil & Refg. Co.'s No. 12 Granbury, 932 ft. N of No. 9, A. Viesca Sur.
Location.

Kettle & Gymosky's No. 1 Kingsbury, 330 ft. from N and W lines of Blk. 19, A. Viesca Sur.
Total depth 4,362 ft.; 6⅝-in. csg. 4,352 ft.; W.O.C.

Ownby Drlg. Co. et al's No. 1 Munson, 50 ft. N of the N line of 12-ac. tract, and 150 ft. W of W line of Munson 25-ac. tract, A. Viesca Sur.
T.D. 293 ft.

Ownby Drlg. Co. No. 3 Pratt, 660 ft. W of No. 2, 330 ft. S of N line, A. Viesca Sur.
T.D. 4,240 ft.; 7-in. csg. at 4,220 ft.; I.P. 272 bbls. per day on proration test.

Sun Oil Co.'s No. 6 Pratt, 330 ft. from S line of lease, 660 ft. W of No. 2, A. Viesca Sur.
Rig up.

Refugio—Refugio County

Houston Oil Co.'s No. 28 P. H. Rooke, 550 ft. SW of No. 7, 660 ft. NW of No. 22, Thomas Mullen Grant.
T.D. 4,900 ft.; W.O.C.

McFaddin-O'Connor Districts—Victoria and Refugio Counties

Texas Co.'s No. 9 McFaddin, 1,850 ft. N, 2 deg., 45 ft. S from No. 2.
7-in. csg. 6,196 ft.; T.D. 6,276 ft.; P.B. to 4,448 ft.; swbd. S.W.; P.B. 2,472 ft.; Comp. for gas well.

Placedo—Victoria County

Eastern States Pet. Co.'s No. 1 Williams, 330 ft. out of S cor. of 130-ac. tract, E. Benavides Sur.
T.D. 4,748 ft.; tested gas; S.D.

Magnolia Pet. Co.'s No. 1 Henderson & Pickering, E offset to discovery well, Wm. Rupley Sur.
P.B. 4,788-95 ft.; comp. for gas well.

Martex Oil Co.'s No. 1 Mitchell, 330 ft. S of W line, 330 ft. N of W line of 500-ac. tract, E. Benavides Sur.
Drlg. shale and lime 5,740 ft.

E. L. Smith's No. 1 Lela, 330 ft. each way out of E cor. Lot 13, Wm. Rupley Sur.
S.D. 4,750 ft.
Set screen at 4,730 ft.; testing.

Clay Creek—Washington County

Pompy et al's No. 1 Klatte, J. F. Perry League, 150 ft. each way out of NW cor. of 50-ac. tract.
Rig up.

Louise—Wharton County

Pure Oil Co.'s No. 4 Kountze, 990 ft. NE. 990 ft. SE of W corner of 240-ac. tract, Morris & Cummings Sur.
T.D. 5,160 ft.; 7-inch csg. at 5,131 ft.; I.P. 325 bbls. in 20 hrs. through ¼-in. choke; T.P. 665 lbs.

Pure Oil Co.'s No. 1 J. H. Roberts, 990 ft. SW and 660 ft. SE of N cor. of 40-ac. tract, Morris & Cummings Sur.
Derrick.

Pure Oil Co.'s No. 2 Weever, 1,980 ft. SW, 990 ft. NW of E cor. of Sec. 22, J. M. Brownson Sur.
Coring shale 5,080 ft.

Shell Pet. Corp.'s No. 1 A. and E. Steves, 1,400 ft. E and 1,200 ft. S of NW cor. of 1,279.4-ac. lease, J. J. Dillard Sur.
Coring shale 5,718 ft.

Pickett Ridge—Wharton County

Texas Co.'s No. 3-A Pierce, 1,320 ft. N, 38 degrees E from discovery.
Drlg. sand and boulders 2,619 ft.

Texas Co.'s No. 1 Riggolets, 150 ft. W, 230 ft. S of NE cor., Sec. 30-17s-24e.
Drlg. shale 8,393 ft.

LOUISIANA

Bay St. Elaine—Terrebonne Parish

Texas Co.'s No. 2 Bayou St. Deanis, 466 ft. N and 1,194 ft. W of SE cor. of Sec. 19-17-24.
T.D. 6,479 ft., prepare to sidetrack junk.

Texas Co.'s No. 3 School Board, Sec. 16-22s-18e.
Location.

Texas Co.'s No. 10 State, 4,650 ft. E and 4,595 ft. S of NW cor. of Sec. 17-22s-18e.
Drlg. cap rock 5,787 ft.

Calliou Island—Terrebonne Parish

Texas Co.'s No. 27 State, Sec. 17-23s-20e.
Drlg. sand 5,738 ft.
Texas Co.'s No. 21 Calliou Island, Sec. 17-23s-20e.
T.D. 4,149 ft.; I.P. 1,883 bbls. per day on ½-in. choge.

SOUTH LOUISIANA FIELDS

Black Bayou—Cameron Parish

Shell Pet. Corp.'s No. 23 Watkins, 1,683 ft. E, 1,825 ft. S of NW cor. Sec. 17-12-12.
W.O.C. 4,611 ft.; I.P. 515 bbls. per day; T.P. 620 lbs.; C.P. 715 lbs.

Shell Pet. Corp.'s No. 24 Watkins, 2,332 ft. W, 695 ft. S of NW cor. Sec. 18-12-12.
Drlg. sand 2,842 ft.

Shell Pet. Corp.'s No. 32 Watkins, 2,230 ft. W and 1,340 ft. S of NE cor. Sec. 18-12s-12w.
T.D. 4,416 ft.; I.P. 500 bbls. per day through 15/64-in. choke.

Shell Pet. Corp.'s No. 3 State.
T.D. 7,807 ft., P.B., coring shale 5,983 ft.

Bosco—Acadia and St. Landry Parishes

Superior Oil Prod. Co.'s No. 3 Prejean, 3,715 ft. S, 808 ft. E of NW cor. of SE¼ of Sec. 34-8s-3e.
Comp.; no gauge.

Superior Oil Prod. Co.'s No. 10 Larcade, 1117 ft. S, 3,345 ft. E of NW cor. of Sec. 35-8s-3e.
T.D. 8,690 ft.; 7-in. csg. 8,673 ft.

Superior Oil Prod. Co.'s No. 5 Iseringhausen, 2,662 ft. S, 686 ft. E out of NW cor. of Sec. 35-8s-3e.
S. D.; made some salt water.

Superior Oil & Prod. Co.'s No. 1 M. Benoit, 1,165 ft. W of SE cor., 2,320 ft. N, Sec 34-8s-3e.
T.D. 8,645 ft.; trying to make drill stem test.

Superior Oil Prod. Co.'s No. 2 Le Blanc, 1,698 ft. S, 937.09 ft. W of NE cor. Sec. 33-8s-3e.
T.D. 8,664 ft.; 7-in. csg. 8,647 ft.; I.P. 302 bbls. per day, 13/64-in. choke; T.P. 750 lbs.; C.P. 600 lbs.

Darrow—Ascension Parish

Humble O. & R. Co.'s No. 3 Gumble, 350 ft. E from center line of R-W along the Rose-Gumble property, 72 ft. NW at R/A Sec. 33-10s-2e.
T.D. 3,948 ft.; sidetracked at 3,810 ft.; drlg. shale 4,226 ft.

Humble O. & R. Co.'s No. 4 Community, 4,825 ft. from NE cor. and 283 ft. S of N line at R/A, Sec. 33-10s-2w.
Digging cellar.

Cameron Meadows—Cameron Parish

Magnolia Pet. Co.'s No. 13 Cameron Meadows, Sec. 21-14s-13w.
Drlg. shale 425 ft.

Magnolia Pet. Co.'s No. 12 Cameron Meadows, 423 ft. E of No. 11.
T.D. 3,334 ft.; resetting screen.

Burton Sutton Oil Co.'s No. 4 School Land, Sec. 16-14s-13w.
Derrick.

Burton Sutton Oil Co.'s No. 7 School Land, Sec. 16-14s-13w.
T.D. 4,004 ft.; 7-in. csg. at 3,982 ft.; I.P. 700 bbls. per day.

Choctaw Dome—Iberville Parish

Standard Oil Co.'s No. 1 Myrtle, 900 ft. N and 550 ft. W of SE cor. of SW¼ of Sec. 52-9s-11e.
Drlg. shale 4,044 ft.

Zeni Oil Co.'s No. 1 Schwing, Sec. 19-17s-24e.
Rig.

Dog Lake—Terrebonne Parish

Texas Co.'s No. 11 State, 1,100 ft. N, 2,476 ft. W of SE cor. of Sec. 21-21s-16e.
S.D. 2,014 ft.

Four Isle—Terrebonne Parish

Texas Co.'s No. 8 La. Land & Expl. Co., 2,177 ft. E, 1,385 ft. S of NW cor. Sec. 24-21s-16e.
Rig up.

Texas Co.'s No. 5 State, 885 ft. S, 2,327 ft. E of NW cor. of Sec. 24-21s-16e.
Location.

Garden Island Bay—Terrebonne Parish

Texas Co.'s No. 16 Garden Island, Sec. 37-23s-33e.
Drlg. shale 4,113 ft.

Texas Co.'s No. 13 State, 3,391 ft. S and 1,604 ft. W of NE cor. Sec. 107-22-32.
Rig up.

Gueydan—Vermillion Parish

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
T.D. 9,545 ft.; drlg. out cmt.; prepare to test.

Hackberry—Cameron Parish

Gulf Refg. Co.'s No. 19 Erwin, 1,315 ft. W along S line of the SE cor. of Sec. and 960 ft. at R/A to S line, Sec. 13-12-10w
Drlg. sand 6,209 ft.

Texas Co.'s No. 14 State, 500 ft. SE of No. 13, Sec. 13-12s-10w.
T.D. 5,546 ft.

Yount Lee Oil Co.'s No. 13 Gulf Land, Sec. 14-12s-10w.
T.D. 5,504 ft.; I.P. 922 bbls. per day on 5/16-in. choke.

Yount Lee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.

New Iberia—Iberia Parish

Canal Oil Co.'s No. 4 Bernard, Sec. 54-12s-7e.
Drlg. shale 1,570 ft.

Harrison & Abercrombie's No. 4 Schwing, Sec. 56-12s-7e.
Rig up.

Helis' No. 1 Sabatoir, 900 ft. N and 1,210 ft. E of SE cor. of Sec. 53-12s-7e.
Drlg. salt 3,631 ft.

Iberia Oil Corp. and Y. D. Spell's No. 2 Bernard, 150 ft. E of No. 1, Sec. 54-12s-7e.
S.D. 3,846 ft.; salt; abnd.

Iowa—Calcasieu and Jeff Davis Parish

Shell Pet. Corp.'s No. 17 Heyd.
Coring sand 6,938 ft.

Jennings—Acadia Parish

Yount Lee Oil Co.'s No. 15 Houssiere-Latriele.
Drlg. shale 4,442 ft.

Lake Hermitage—Plaquemines Parish

Humble O. & R. Co.'s No. 1 State Land, 1,080 ft. E, 200 ft. N of Texas Gulf No. 6, Sec. 11-18s-25e.
16-in. csg. 160 ft.; drlg. shale 1,200 ft.

Lake Barre—Terrebonne Parish

Texas Co.'s No. 35 Lake Barre, Sec. 40-21s-19e.
Drlg. lime 4,271 ft.

Texas Co.'s No. 36 Lake Barre.
T.D. 3,788 ft.; W.O.C.

Leesville—Lafourche Parish

Texas Co.'s No. 23 Leesville, 975 ft. S, 1,975 ft. W of NW cor. of SW¼ Sec. 26-21-22.
Location.

Texas Co.'s No. 32 Leesville, 890 ft. S, 2,484 ft. W of NE cor. SE¼ Sec. 27-21s-22e.
Rig up.

Texas Co.'s No. 33 Leesville, 1,590 ft. S, 2,484 ft. W of NE cor. SE¼ Sec. 27-1s-22e.
Rig up.

Texas Co.'s No. 26 Leesville, 476 ft. E, 385 ft. E of NW cor. SW¼ Sec. 26-21s-22e.
T.D. 4,206 ft.; 7-in. csg. at 4,170 ft.; W.O.C.; I.P. 1,795 bbls. per day on ½-in. choke.

Texas Co.'s No. 37 Leesville, 1,266 ft. N, 103 ft. W of SE cor. NE¼ Sec. 27-21s-22e.
Drlg. salt 5,022 ft.

Roanoke—Jefferson Davis Parish

Glassel et al's No. 1-A La. Irrigation Mill Co., Sec. 2-9s-W line.
Drlg. shale 5,910 ft.

Glassel et al's No. 1 La. Irrigation Mill Co., 695.5 ft. E and 475 ft. N of SW cor. Sec. 1-9s-4w.
10¾-in. csg. 2,250 ft.

Humble Oil & Refg. Co.'s No. 4 Devillbiss, 440 ft. S of N line and 440 ft. W of E line of Sec. 14-9s-4w.
Drlg. shale and lime 8,835 ft.

Humble O. & R. Co.'s No. 1 Clayton, 2,233 ft. from S line, 440 ft. from E line, Sec. 10-9s-4w.
S.D. 9,142 ft.

Humble O. & R. Co.'s No. 2 C. N. Taylor, 1,320 ft. E, 440 ft. S of NW cor. of SW¼ Sec. 12-9s-4w.
Rig up.

Humble O. & R. Co.'s No. 1 Nelson Thomas, 330 ft. W of No. 2 Kratzer, 440 ft. N and W of SE cor. of 200-ac. tract.
Drlg. sandy shale 10,405 ft.

Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 12-9s-4w.
T.D. 10,317 ft.; cored from 10,313-17 ft.; recovered 12 ft. of sand, good odor.

Shell Pet. Corp.'s No. 1-H Kratzer, 660 ft. N, 330 ft. E of SW cor. of SW¼ Sec. 1-9s-4w.
T.D. 8,828 ft.; P.B. 3,765 ft.; abnd.

Sweet Lake—Calcasieu Parish

Pure Oil Co.'s No. 13 Gulf Land, 800 ft. S, 66 deg. 42 ft. E of No. 12, Sec. 13-13-12.
Rigging up.

Sulphur—Calcasieu Parish

Union Sulphur Co.'s No. 808 fee.
Drlg. sand 4,930 ft.

Union Sulphur Co.'s No. 812 fee.
S.D. 3,336 ft.

Union Sulphur Co.'s No. 811 fee.
T.D. 2,846 ft.; milling out csg.

White Castle—Iberville Parish

Shell Pet. Corp.'s No. 8 Wilbert.
Coring shale 5,766 ft.

Shell Pet. Corp.'s No. 1 White Castle Shingle Co., 1,930 ft. W, 100 ft. S from NE cor. of lease.
T.D. 5,165 ft.; running 7-in. csg.

Shell Pet. Corp.'s No. 1 Adams, 2,340 ft. N, 100 ft. E of SW cor. of lease.
T.D. 8,919 ft.; 7-in. csg.; P.B. 8,879 ft.

Miscellaneous Wildcats

TEXAS

Austin County

Paul English et al's No. 1 Felix Guhn, 1,000 ft. S, 360 ft. E from NW cor. of 71-ac. tract, D. Chomel Sur., 1 mile SE of Kinney.
Rig up.

R. L. Wheelock et al's No. 1 Nancy Harrigat, 330 ft. each way out of the east cor. of the 78-ac. tract, Benj. Babbitt Sur.
T.D. 2,586 ft.; pulled in derrick skidded 60 ft.; rig up.

T. F. Wood et al's No. 1 Trenchman, 330 ft. from SE line of a 50-ac. tract, James Cummins Sur.
S.D. 750 ft.

Brazoria County

George Strake's No. 2 Truska, 991 ft. W of No. 1, H.T.&B. Sur., Sec. 7.
S.D. 6,000 ft.

Showers & Moncrief's No. 1 Hughey, 5,500 ft. NW of discovery well, in center of Lot 18, H.T.&B. Sur., Sec. 29, Abst. 292.
Location.

Texas Co.'s No. 1 Freeport Sulphur Co., 2,764 ft. N, 1 deg., 40 ft. W and 1,134 ft. S, 88 deg., 20 ft. W of NW cor. of S. F. Austin Sur., Abst. No. 35, being in the Conception Arcola Sur.
T.P. 4,544 ft.; P.B. to 3,969 ft.; rig up air lift.

Chambers County

Texas Gulf Prod. Co.'s No. 1 Simon, 1,980 ft. WE line, 990 ft. SN line, Sec. 33, T.& N.O. Sur.
Moving in material.

Calhoun County

Continental Oil Co.'s No. 2 American National Realty Co., 660 ft. from NW line, 660 ft. from NE line of Sec. 6, Blk. C, Pedro Garcia Sur.
S.D. 6,532 ft.

Colorado County

Clyde Creighton et al's No. 1 Witte, 150 ft. S and E of most westerly NW cor. of H. White Sur.
10-in. csg. 341 ft.; T.D. 352 ft.

Coyle & Concord's No. 1 fee, 550 ft. from N line, 1,950 ft. from E line of Sec. 45, I.&G.N. Sur.
10¾-in. csg. 610 ft.; T.D. 698 ft.

Mid-Continent Oil Co.'s No. 1 D. E. Burnhardt-Scherz, 330 ft. out of the most southerly SE cor. of a 270-ac. tract, J. Cummins Sur.
Drlg. sandy shale 3,544 ft.

Fayette County

Lewis Franklin's No. 1 V. Dybala, center of 75-ac. lease, A. Thompson Sur.
Location.

Fort Bend County

W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
S.D. 2,900 ft.

George White et al's No. 1 M. M. Cravins, 1,000 ft. from N, 300 ft. W of SW cor. of survey, B.B.B.&C. Sur. No. 3.
Rig up.

Grimes County

Dillinger & Hammer's No. 1 L. P. Lane, 150 ft. S of N line and 150 ft. W of E line of 65-ac. tract, R. P. Stewart Sur.
Derrick.

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
S.D. 3,080 ft.

Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
7-in. csg. 2,678 ft.; T.D. 2,815 ft.

Patton et al's No. 1 Yeager, 1,000 ft. W of E line, 170 ft. S of N line of 53-ac. tract and survey, A. Ruscello Sur., NW of Iola Sur.
S.D. 1,000 ft.

Wallace and Jordan's No. 1 Henderson, 330 ft. out of most NE cor. of 40-ac. tract, Chattick & Porter Sur.
Location.

Harris County

Cockburn Oil Co.'s No. 1 R. E. Brooks, 330 ft. N of N bank of Bayou, 330 ft. from WL of R. E. Brooks, "A" tract.
Drlg. shale 873 ft.

C. C. Foster et al's No. 1 H. K. Johnson, 2,000 ft. from S line and C of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.

Stanolind Oil & Gas Co.'s No. 1 F. J. Burkey, C of Lot 15, Blk. 105, H.T.&B. Sur. No. 5.
Bldg. foundation.

Stanolind Oil & Gas Co.'s No. 1 C. F. Gibson, C of Lot 9, Blk. 41, H.T.&B. Sur. No. 5.
Bldg. foundation.

Stanolind Oil & Gas Co.'s No. 1 J. W. Horlow, C of Lot 10, Blk. 82, H.T.&B. Sur. No. 5.
Bldg. foundation.

Stanolind Oil & Gas Co.'s No. 1 Ed Wells, C of Lot 3, Blk. 16, H.T.&B. Sur. No. 5.
Bldg. foundation.

Stanolind O. & G. Co.'s No. 1 First Natl. Bank of Houston, 950 ft. from NE line, 990 ft. from SE line of 119.6-ac. tract, Callahan and Vance Sur.
Drlg. sandy shale 4,322 ft.

R. E. Young, tr.'s No. 2 P. S. Griffith, 3,476 ft. S of N line, 2,030 ft. E of W line of A. R. Bodman Sur.
S.D. 1,465 ft.

Jackson County

A. M. Harris' No. 1 Whitley, 800 ft. out of SE cor. of F. G. Keller Sur.
Location.

Shell Pet. Corp.'s No. 1 Combs, 466 ft. EW line, 2,500 ft. NE line of 242.75-ac. tract, M.&C. Sur., Sec. 33.
T.D. 5,650 ft.; made drill stem test at 5,627 ft.; built up 110 lbs. pressure.

Jasper County

Marathon Oil Co.'s No. 1 Jasper County Lumber Co., 330 ft. out of NE cor. of 176.5-ac. tract 5 miles SE of Jasper, T. C. Holmes Sur.
Drlg. shale and sand 4,341 ft.

Jefferson County

Humble O. & R. Co.'s No. 1-B McFaddin, 330 ft. E of W line of 240-ac. tract, 366 ft. NW of Gulf of Mexico, also 50 ft. NW of N of Highway, Sec. 370, C. F. Code Sur.
10¾-in. csg. 503 ft.; drlg. shale 2,058 ft.

Sun Oil Co.'s No. 1 Hebert & Braussard,

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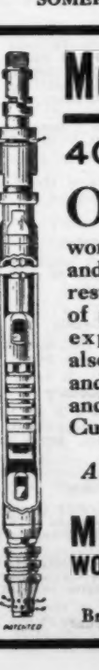

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6,390 ft. NW along SW line and 660 ft. NE at right angles to SW line, B. Blackman Sur., Abst. No. 2.
Reaming; T.D. 6,837 ft.

Liberty County

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 147-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.

Extension Oil Co.'s No. 1 J. A. Lovett, 330 ft. from E and 600 ft. from S line of lease, P. P. Deevers Sur.
S.D. 4,048 ft.

D. R. Furse's No. 1 J. F. Kover, 300 ft. out of SW cor. of 100-ac. tract, J. R. Mayhon Sur.
Location.

Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 3,550 varas from E line and 505 varas from N line of Samuel Strong Sur.
Drlg. shale 4,198 ft.

A. L. Maxwell's No. 1 M. P. Hinchliff, 200 ft. from E line and 1,000 ft. from the N line of survey, H.&T.C. Sur., Sec. 10a.
T.D. 5,588 ft.; cmtd. back to 5,494 ft.; twisted off drill stem at 2,900 ft.; S.D.

Peveto et al's No. 1 Palmer, Joseph Former Sur.
S.D. 2,930 ft.

Thomas et al's No. 1-A Eicke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,047 ft.; 6⅝-in. csg. at 5,029 ft.

Turnbull & Irwin's No. 1 Cox, 1,000 ft. from the E line and 200 ft. from S line of 108.2-ac. lease, F. J. G. Smiley Sur.
Location.

Matagorda County

Continental Oil Co.'s No. 1 Feife, J. S. Criswell Sur., 2,000 ft. E of W line, 2,800 ft. N of S line of survey.
T.D. 6,073 ft.; 11¾-in. csg. 6,072 ft.; W.O.C.

Dr. Griffith's No. 1 fee, 3,000 ft. from E line and 2,000 ft. from W line of Wm. H. Bell Sur.
Rig up and S.D.

Helmerich & Payne's No. 1 Hawkins, 350 ft. S, 70 deg. W of Cockburn Oil Co.'s No. 6 Hawkins.
T.D. 5,922 ft.; drill stem stuck at 5,500 ft.

Horace M. Smith, Inc.'s No. 1 Wadsworth ranch, 150 ft. out of S cor. of Lot No. 8, S. R. Fisher Sur.
T.D. 8,418 ft.; shut in.

Montgomery County

Travis Baker et al's No. 1 Foster Estate, 1,200 ft. E of W line and 700 ft. S of N line of Blk. No. 50, J. M. De La Garza Sur.
Derrick.

Mid-Texas Oil Co.'s No. 1 Deitz Land & Timber Co., 560 varas from W line, 200 varas from S line of Robert F. Oliver Sur.
Spudded.

George C. Schmidt's No. 1 Delta Land & Timber Co., 2,800 ft. N, 1,100 ft. E of SW cor. of tract, William McBride Sur.
Location.

T. T. Word, trustee's No. 1 Delta Land & Timber Co., John Hostetter Sur.
S.D. 2,676 ft.

Orange County

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
S.D. 2,770 ft.

Ellis Oil Co.'s No. 1 G. W. Pell, 100 ft. from N and 300 ft. from W line of Pell tract in the J. M. Heneric Sur.
S.D. 2,035 ft.

Polk County

Howard Daily et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 14 miles NE of Corrigan.
S.D. 60 ft.

J. P. Anderson's No. 1 E. L. Duke (O.W. D.D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 59, P. J. Mineral Sur.
Waiting on a new mud pump; T.D. 5,304 ft.

J. W. Leggett et al's No. 1 Bergman, C of 294-ac. tract, or 1,100 ft. W of H.E.&W.T. R.R., J. T. Pinkney Sur.
S.D. 4,000 ft.

Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 300-ac. tract in the George Jameson Sur.
Location.

Refugio County

Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 3,320 ft. from E line of J. Coughlin Sur.
Location.

Robertson County

H. L. Patton's No. 1 H. Ely, located on a 616-ac. tract, A. Manchola Sur.
S.D. 3,329 ft.

San Jacinto County

Ralph Sturam et al's No. 1 R. B. Love et al, 475 ft. S of N line and 2,000 ft. W of E line of 177-ac. tract, Drury McGee Sur.
Moving in rig.

Trinity County

Gulf Prod. Co.'s No. 5 Trinity County Lbr. Co., 1,017 ft. S of NE cor. of H. Y. Rook Sur., 444 ft. EW line, O. Peterson Sur.
Drlg. sandy shale 440 ft.

Gulf Prod. Co.'s No. 4 Trinity, 4,520 ft. N along W line of SW cor. of Sur. and 330 ft. E at right angles to said line, Abst. 2,095 ft.

Victoria County

Texas Co.'s No. 1 J. J. Warden, 4,200 ft. N. 55 degrees E and 486 ft. N, 35 degrees W from SW cor. of Warden ranch, Edward McDonough League.
Moving in rig.

Washington County

C. J. Laas' No. 1 T. Weinert, 1,840 ft. SW from E cor. of survey, thence 250 ft. NW at right angles, T. P. Borden Sur.
Location.

Wharton County

Navarro Oil Co.'s No. 1 Schoellman, 330 ft. S of S and E lines, 1,238 ft. from W line of Nasario Mansha Sur.
10⅝-in. csg. 996 ft.

Sterling Oil & Refg. Co.'s No. 1 Frank Janik Sr., 1,859 ft. from N line, 467 ft. W from SE cor. of Janik tract, Johathan Scott Sur.
Drlg. sandy shale 4,340 ft.

SOUTH LOUISIANA

Acadia County

Continental Oil Co.'s No. 1 T. Ortego, 990 ft. S, 500 ft. E of NW cor. SW¼ Sec. 26-7s-2w.
Made gas and distillate; prepare to deepen.

Beauregard Parish

Richardson & Martin's No. 1 Southwest Lbr. Co.
Location.

Calcasieu Parish

Fred Oil Co.'s No. 2 Faizt, 262 ft. E and 83 ft. S of NW cor. SE¼ Sec. 26-4s-10w.
S.D. 3,575 ft.

Foha Oil Co.'s No. 1 Airhart, 275 ft. W and S of NE cor. SW¼ SE¼ Sec. 14-9s-8w.
Reaming 7,668 ft.

Nicholas McCaleb's No. 1 Grey, 2,300 ft. S, 1,200 ft. E of NW cor. Sec. 22-8s-13w.
S.D. 1,565 ft.

Texas Co.'s No. 12 State, 2,311 ft. N, 1,906 ft. E of SW cor. of Sec. 12-9s-8w.
Location.

Texas Co.'s No. 5 Nickerson, 3,826 ft. N, 3,192 ft. W of SE cor. of Sec. 12-19s-8w.
T.D. 6,732 ft.; drlg. plug.

Texas Co.'s No. 6 Nickerson, 287 ft. N, 289 ft. W of SE cor. of NW¼ Sec. 12-19s-8w.
Location.

Union Sulphur Co.'s No. 1 Prairie Land & Canal Co., 1,312 ft. S, 610 ft. W of NE cor. of Sec. 1-11s-9w.
Spudded.

Union Sulphur Co.'s No. 13 State.
Drlg. shale 1,819 ft.

Union Sulphur Co.'s No. 3 Castle, 1,350 ft. W, 150 ft. N of SE cor. of NW¼ Sec. 14-9s-8w.
Drlg. shale 6,410 ft.

Union Sulphur Co.'s No. 3 Mayo-Reeves, 1,064 ft. S and 1,041 ft. E of NW cor. of Sec. 12-9-8.
T.D. 6,778 ft.; P.B. to 5,942 ft.; W.O.C.

Union Sulphur Co.'s No. 3 Powell, 2,283 ft. S, 2,901 ft. E of NW cor. Sec. 12-8s-8w.
Location.

Union Sulphur Co.'s No. 11 State, 2,137 ft. S, 1,539 ft. E of NW corner of Sec. 12-9s-8w.
I.P. 400 bbls. per day on ¼-in. choke.

Union Sulphur Co.'s No. 2 Mayo Reeves.
Drlg. shale 6,430 ft.

Union Sulphur Co.'s No. 7 State, 1,316 ft. N and 199 ft. E of the SW cor. of Sec. 12-9s-8w.
Location.

Union Sulphur Co.'s No. 9 State, NW offset to Texas Co.'s No. 2 Nickerson.
T.D. 6,755 ft.; washed to 6,760 ft.; preparing to test; made 240 bbls. on ¼-in. choke.

Wheeler Oil Corp.'s No. 1 School Lot, 1,708 ft. E, 1,325 ft. N of SW cor. Sec. 16-9s-7w.
Drlg. shale 5,892 ft.

Cameron Parish

Magnolia Pet. Co.'s No. 1 J. B. Broussard, 330 ft. E and S, out of NW cor. of the SW¼ of SE¼ of Sec. 13-12s-9w.
T.D. 7,890 ft.; stuck drill stem second time, fishing.

Steinberger Pet. Co.'s No. 1 Drew, 330 ft. out of NW cor. NE¼ of Sec. 26-10s-11w.
Location.

Southern Sulphur Co.'s No. 1 State, Sec. 29-15s-10w.
S.D. 3,215 ft.

East Baton Rouge Parish

Superior Oil & Prod. Co.'s No. 1 Duplanter-Community, 1,500 ft. westerly along the N line from the NE cor. of D. A. and E. A. Duplanter's 130.7-ac. tract, thence 330 ft. at R/A.
T.D. 7,745 ft.; running 9⅝-in. csg.

East Feliciana Parish

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,550 ft. N of SW cor. Sec. 76.
S.D. 1,569 ft.

Iberia Parish

Jefferson Lake Oil Co.'s No. 1 State, Twp. 11s-5e.
Drlg. shale 4,750 ft.

Little Pigeon Oil Co.'s No. 1 McHugh, 1,-200 ft. S, 229 ft. W of NE cor. Sec. 26-12s-10e.
S.D. 2,165 ft.

Meade Oil Co.'s No. 1 Hamilton, near town of Loss, in the NW cor. of parish, Sec. 28-12-5.
S.D. 260 ft.

Texas Co.'s No. 1 State Faunce Point.
Drlg. shale 5,568 ft.

J. S. Watterman's No. 1 St. Julian, 75 ft. E of W line of property and 50 ft. N of Lake Poigneur, Sec. 4-12s-5e.
Drlg. shale 1,810 ft.

Jefferson Davis Parish

Howard Naylor et al's No. 1 Johnson-Bordeaux, 1,734 ft. N, 52 deg. N, 45 min. E, and 1,853 ft. S, 37 deg. 15 min. E out of SW cor. Sec. 39-10s-3w.
S.D. 810 ft.

LaFourche Parish

Coastal Oil Co.'s No. 2 Constantine, 1,476 ft. N, 809 ft. E of SW cor. Sec. 26-21-22e.
Location.

St. Bernard Parish

Emerald Pet. Corp.'s "Shell Beach Properties" No. 1, on S edge of Bayou Louis, Sec. 31-13s-15e.
T.D. 7,385 ft.; stuck drill stem; P.B. to 1,300 ft.; to sidetrack.

St. Martin Parish

Texas Co.'s No. 7 St. Martin Land, 2,042 ft. N, 500 ft. W of SE cor. of Sec. 17-8s-7e.
Drlg. shale 8,330 ft.

Plaquemines Parish

Southern Sulphur Co.'s No. 1 Manhattan Fruit Co.
S.D. 339 ft.

Venice Oil Co.'s No. 1 Manhattan Fruit, Sec. 26-21s-30e.
S.D. 339 ft.

Vermillion Parish

Delcambre & Shelton's No. 1 Adam Delcambre, south degrees E, 825 ft. from most northerly cor. of irregular Sec. 43-17-5.
Drlg. gumbo 1,442 ft.

CALIFORNIA WILDCATS

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 5 Capitan, Santa Barbara Co.	5- 4-30	2,558	rd. sh. drlg.
Shell Oil Co., No. 6 Capitan, Santa Barbara Co.	5- 4-30	....	rigging up
Shell Oil Co., No. 7 Capitan, Santa Barbara Co.	5- 4-30	....	bldg. rig.
Shell Oil Co., No. 8 Capitan, Santa Barbara Co.	5- 4-30	....	rig suspended
Shell Oil Co., No. 9 Capitan, Santa Barbara Co.	5- 4-30	....	location
General Petroleum, No. 15 Capitan, Santa Barbara Co.	32- 5-30	323	cmtd. 187
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	10- 4-29	1,998	hd. sh. drlg.
Honolulu Oil Corp., No. 9 Elwood, Santa Barbara Co.	tideland	3,480	cleaning out
Barnsdall-Rio Grande, No. 12 Elwood, Santa Barbara	tideland	5,183	sd. sh. drlg.
Barnsdall-Rio Grande, No. 88-1 Elwood, Santa Barbara	tideland	3,477	cleaning out
Bankline Oil Co., No. 10 Elwood, Santa Barbara Co.	tideland	3,835	will redrl.
Spalding, Caroline, No. 11 Elwood, Santa Barbara Co.	tideland	....	bldg. rig.
Signal Oil & Gas Co., No. 5 Elwood, Santa Barbara Co.	tideland	951	sd. sh. drlg.
Pacific Western, No. 15 Elwood, Santa Barbara Co.	tideland	3,565	sd. sh. drlg.
Union Oil Co., No. 3 Santa Marin, Santa Barbara Co.	16-10-34	....	bldg. rig
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	8,116	recmtd. 7,255
Calco Pet. Co., No. 1 Las Posas, Ventura Co.	17- 3-20	4,160	reaming
Union Oil Co., No. 1 Bardsdale, Ventura Co.	12- 3-20	3,700	deepening
Texas Co., No. 1 Fillmore, Ventura Co.	29- 4-19	706	sd. sh. drlg.
Bankline Oil Co., No. 1 South Mountain, Ventura Co.	3- 3-19	....	rigging up
Texas Oil Co., No. 1 South Mountain, Ventura Co.	4- 3-19	7,423	wet—idle
Paloma Oil Co., No. 1 Susana, Ventura Co.	12- 2-18	2,686	sd. sh. drlg.
Hull, James, No. 1 Susana, Ventura Co.	2- 2-18	297	sd. sh. drlg.
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	2,875	sd. sh. drlg.
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	8,924	reaming
General Pet., No. 1 Oxnard, Ventura Co.	26- 2-23	3,420	sd. sh. drlg.
Continental Oil Co., No. 4 San Miguelito, Ventura Co.	23- 3-24	5,900	hd. sd. drlg.
C. C. M. Oil Co., No. 1 San Miguelito, Ventura Co.	23- 3-24	10,080	redrlg. 6,940
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	5,650	sd. sh. drlg.
Cumberland Oil Co., No. 1 Devil's Den, Kern Co.	17-26-18	3,262	cleaning out
Continental Oil Co., No. 2 McDonald, Kern Co.	18-28-20	953	sd. sh. drlg.
Belmac Drlg. Co., No. 1 McKittrick, Kern Co.	22-29-21	3,530	sd. sh. drlg.
Big McKittrick Oil Co., No. 1 McKittrick, Kern Co.	30-30-22	....	rigging up
General Pet. Co., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Standard Oil Co., No. 2-A North Belridge, Kern Co.	36-27-20	8,500	sd. sh. drlg.
Standard Oil Co., No. 3 North Belridge, Kern Co.	36-27-20	3,562	sd. sh. drlg.
Belridge Oil Co., No. 32-35 North Belridge, Kern Co.	35-27-20	7,626	br. sh. drlg.
Belridge Oil Co., No. 33-35 North Belridge, Kern Co.	35-27-20	7,198	br. sh. drlg.
Union Oil Co., No. 19 North Belridge, Kern Co.	36-27-20	5,700	lr. sh. drlg.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	5,630	sd. sh. drlg.
Ohio Oil Co., No. 1 Maricopa Flats, Kern Co.	11-11-12	....	rigging up
Woods & Bailey, No. 1 McFarland, Kern Co.	16-26-26	800	cmtd. 798
Republic Pet. Co., No. 1 McFarland, Kern Co.	20-26-27	261	sd. sh. drlg.
Standard Oil Co., No. 1 Delano, Kern Co.	1-25-23	2,455	gas; shut in
Standard Oil Co., No. 2 Delano, Kern Co.	1-25-23	3,256	gas; shut in
Standard Oil Co., No. 4 Delano, Kern Co.	34-24-23	2,460	gas; shut in
Trico Oil & Gas Co., No. 1 Delano, Kern Co.	3-25-23	2,525	gas well
Trico Oil & Gas Co., No. 3 Delano, Kern Co.	36-24-22	4,835	suspended
Trico Oil & Gas Co., No. 5 Delano, Kern Co.	3-25-23	2,467	gas well
Baker, Cliff, No. 1 Poso Creek, Kern Co.	33-27-28	1,684	pump 135 b.d.
Carrec Oil Co., No. 1 Kern Front, Kern Co.	10-28-27	386	sd. sh. drlg.
National Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	....	rigging up
Kern River Oilfields, No. 4 Kern Front, Kern Co.	25-28-27	931	sd. sh. drlg.
Associated Oil Co., No. 2 Kern Front, Kern Co.	4-28-27	2,603	O. S. drlg.
C. C. M. Oil Co., No. 4 Kern Front, Kern Co.	23-28-27	2,117	pump 200 b.d.
Bishop Oil Co., No. 1 Kern Front, Kern Co.	26-28-27	1,950	cmtd. 1,908
Republic Petroleum, No. 2 Kern Front, Kern Co.	24-28-27	1,924	sd. sh. drlg.
Barnsdall Oil Co., No. 4 Mountain View, Kern Co.	32-29-29	5,212	redrlg. 4,340
Canal Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	2,256	sd. sh. drlg.
C. C. M. Oil Co., No. 1 Mountain View, Kern Co.	11-30-28	6,076	sd. sh. drlg.
Texas Co., No. 5 Mountain View, Kern Co.	15-30-28	5,501	flow 3,475 b.d.
Hogan, Dana, No. 1 Mountain View, Kern Co.	32-30-29	....	rigging up
Union Oil Co., No. 8 Mountain View, Kern Co.	23-30-28	7,086	sd. sh. drlg.
National Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	....	rigging up
Mohawk Oil Co., No. 12 Mountain View, Kern Co.	30-30-29	5,151	sd. sh. drlg.
Mohawk Oil Co., No. 13 Mountain View, Kern Co.	30-30-29	....	rigging up
Mohawk Oil Co., No. 14 Mountain View, Kern Co.	30-30-29	....	bldg. rig
Standard Oil Co., No. 9 Mountain View, Kern Co.	24-30-28	5,400	O. S. drlg.
Standard Oil Co., No. 10 Mountain View, Kern Co.	23-30-28	4,420	sd. sh. drlg.
Standard Oil Co., No. 11 Mountain View, Kern Co.	13-30-28	998	sd. sh. drlg.
Standard Oil Co., No. 12 Mountain View, Kern Co.	24-30-28	....	location
Wood-Callahan Oil Co., No. 1 Mountain View, Kern	25-30-28	4,975	sd. sh. drlg.
Mountain View Oil Co., No. 1 Mountain View, Kern	25-30-28	5,650	cleaning out
United Expl. Co., No. 1 Bakersfield, Kern Co.	23-30-27	2,781	sd. sh. drlg.
Jergins Trust Co., No. 9 Edison, Kern Co.	24-30-29	1,239	dry; abd.
Monterey Expl. Co., No. 8 Edison, Kern Co.	14-30-29	....	rig suspended
Sunday, G. M., No. 1 Edison, Kern Co.	5-30-30	501	sd. sh. drlg.
Union Oil Co., No. 1 Edison, Kern Co.	13-30-29	....	location
Union Oil Co., No. 2 Edison, Kern Co.	13-30-29	....	location
General Pet., No. 5 Edison, Kern Co.	15-30-29	3,753	wet; recmtd.
General Pet., No. 6 Edison, Kern Co.	24-30-29	1,523	pump 350 b.d.
General Pet., No. 7 Edison, Kern Co.	14-30-29	....	rigging up
Appling, C. E., No. 1 Edison, Kern Co.	4-30-29	3,700	gr. sd. drlg.
Berry Oil Co., No. 1 Edison, Kern Co.	10-30-29	3,953	sd. sh. drlg.
Bauer, J. H., No. 1 Edison, Kern Co.	21-30-29	....	location
Woodward Oil Co., No. 3 Edison, Kern Co.	36-29-29	685	suspended
Woodward Oil Co., No. 4 Edison, Kern Co.	36-29-29	480	suspended
Seeple, J. O., No. 1 Elk Hills, Kern Co.	5-30-24	4,240	deepening
General Pet., No. 1 Arvin, Kern Co.	1-32-29	6,961	sd. sh. drlg.
Hall-Baker Co., No. 1 Arvin, Kern Co.	16-31-30	1,276	suspended
Hall-Baker Co., No. 3 Arvin, Kern Co.	21-31-30	1,916	suspended
Hutcheson & Osborne, No. 1 Arvin, Kern Co.	32-30-30	1,100	wet; idle
Milham Expl. Co., No. 1 Buttonwillow, Kern Co.	6-28-23	2,986	sd. sh. drlg.
Texas Co., No. 1 Buttonwillow, Kern Co.	6-28-23	....	bldg. rig
Superior Oil Co., No. 1 Semi-Tropic, Kern Co.	23-27-23	2,418	gas; shut in
Superior Oil Co., No. 2 Semi-Tropic, Kern Co.	34-27-24	....	rigging up
Fullerton Oil Co., No. 1 Semi-Tropic, Kern Co.	1-27-22	2,391	gas; shut in
Fullerton Oil Co., No. 2 Semi-Tropic, Kern Co.	14-27-23	2,463	gas; shut in
Fullerton Oil Co., No. 3 Semi-Tropic, Kern Co.	9-27-23	3,150	gas; shut in
Fullerton Oil Co., No. 4 Semi-Tropic, Kern Co.	26-27-23	2,396	gas; shut in
Fullerton Oil Co., No. 5 Semi-Tropic, Kern Co.	8-27-25	2,347	flowing gas
Fullerton Oil Co., No. 6 Semi-Tropic, Kern Co.	25-27-23	2,441	flowing gas
Fullerton Oil Co., No. 7 Semi-Tropic, Kern Co.	25-27-23	2,437	flowing gas
Fullerton Oil Co., No. 8 Semi-Tropic, Kern Co.	25-27-23	....	bldg. rig
Fullerton Oil Co., No. 9 Semi-Tropic, Kern Co.	26-27-23	2,431	producing gas
Fullerton Oil Co., No. 10 Semi-Tropic, Kern Co.	25-27-23	2,414	producing gas
Fullerton Oil Co., No. 11 Semi-Tropic, Kern Co.	14-27-23	....	rigging up
Standard Oil Co., No. 2 Semi-Tropic, Kern Co.	5-27-23	4,343	wet; testing
Standard Oil Co., No. 3 Semi-Tropic, Kern Co.	7-27-23	2,355	producing gas
Standard Oil Co., No. 4 Semi-Tropic, Kern Co.	9-27-23	3,242	wet; idle
Standard Oil Co., No. 5 Semi-Tropic, Kern Co.	9-27-23	4,265	sd. sh. drlg.
Standard Oil Co., No. 6 Semi-Tropic, Kern Co.	8-27-23	2,361	producing gas

Standard Oil Co., No. 7 Semi-Tropic, Kern Co.	1-27-22	2,976	sd. sh. drlg.
Standard Oil Co., No. 8 Semi-Tropic, Kern Co.	12-27-22	2,426	producing gas
Standard Oil Co., No. 9 Semi-Tropic, Kern Co.	1-27-22	....	bldg. rig
Standard Oil Co., No. 10 Semi-Tropic, Kern Co.	17-27-23	....	rigging up
Standard Oil Co., No. 11 Semi-Tropic, Kern Co.	30-27-24	....	bldg. rig
Standard Oil Co., No. 12 Semi-Tropic, Kern Co.	30-27-24	....	rigging up
Milham Expl. Co., No. 1 Semi-Tropic, Kern Co.	15-27-23	3,122	producing gas
Milham Expl. Co., No. 2 Semi-Tropic, Kern Co.	15-27-23	2,429	producing gas
Milham Expl. Co., No. 3 Semi-Tropic, Kern Co.	15-27-23	916	sd. sh. drlg.
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-23	1,930	cleaning out
Shell Oil Co., No. 1 Buena Vista, Kern Co.	9-32-25	8,087	hd. sd. drlg.
Ohio Oil Co., No. 3 Buena Vista, Kern Co.	32-31-26	3,981	sd. sh. drlg.
Silver Gate Oil & Gas Co., No. 1 Tejon, Kern Co.	7-10-19	1,476	sd. sh. drlg.
Hall-Baker Co., No. 1 Tejon, Kern Co.	12-11-19	985	sd. sh. drlg.
Taft Well Drlg. Co., No. 1 Kreyenhagen, Fresno Co.	33-22-16	3,600	sd. sh. drlg.
Pacific Expl. Co., No. 1 Kreyenhagen, Fresno Co.	17-21-17	454	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,944	redrlg. 9,092
K.N.D.A., No. 54 Kettleman-North, Fresno Co.	24-21-16	6,864	br. sh. drlg.
Standard Oil Co., No. 2 Kettleman Middle, Kings Co.	29-22-19	7,700	gr. sd. drlg.
Pet. Sec., No. 1 Kettleman Middle, Kings Co.	30-22-19	2,380	sd. sh. drlg.
Continental Oil Co., No. 1 Kettleman-South, Kern Co.	7-25-20	7,415	reaming
Farrel Pet., Well No. 1 San Luis Obispo Co.	18-31-12	1,846	sd. sh. drlg.
Willett Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-25-15	3,687	suspended
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings	21-22-20	2,490	gas well
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	710	suspended
Dudley Ridge Dev. Co., No. 1 Dudley Ridge, Kings Co.	24-23-20	1,300	reaming
Amerada Pet., No. 1 F.L.D., San Joaquin Co.	15- 2-5	6,030	sd. sh. drlg.
Amerada Pet., No. 2 F.L.D., San Joaquin Co.	15- 2-5	4,180	sd. sh. drlg.
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	8,402	gas well; idle
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24-3	4,767	hd. sh. drlg.
Texas Co., No. 1 Petrolia, Humboldt Co.	1- 2-2	6,133	suspended
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	4,253	sd. sh. drlg.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Republic Pet. Co., No. 1 El Segundo, Los Angeles Co.	18- 3-14	7,285	hd. sh. drlg.
Colly Oil Co., No. 1 El Segundo, Los Angeles Co.	12- 3-15	....	rigging up
Associated Oil Co., No. 4 Inglewood Deep, Los Angeles	7- 2-14	4,458	P.B. 2,700
Scientia Oil Co., No. 1 Inglewood Deep, Los Angeles	7- 2-14	4,590	suspended
Standard Oil Co., No. 7 Inglewood Deep, Los Angeles	17- 2-14	3,726	suspended
Standard Oil Co., No. 8 Inglewood Deep, Los Angeles	17- 2-14	3,301	completing
Allied Pet., No. 1 Del Rey, Los Angeles Co.	28- 2-15	6,709	suspended
Blackline Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,634	fish D.P.
Crest Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	4,395	sd. sh. drlg.
Lucas, Andrew, No. 1 Del Rey, Los Angeles Co.	35- 2-15	4,780	sd. sh. drlg.
Red Seal Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,455	O.S. drlg.
Mathews Pet. Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,523	cleaning out
Birch Royer Oil Co., No. 1 Del Rey, Los Angeles Co.	34- 2-15	6,532	redrlg. 6,131
Joyce Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,742	P.B. 6,695
Royalty Serv. Corp., No. 3 Del Rey, Los Angeles Co.	27- 2-15	6,575	swabbing
Union Oil Co., No. 13 Del Rey, Los Angeles Co.	27- 2-15	6,306	flow 805 b.d.
Union Oil Co., No. 14 Del Rey, Los Angeles Co.	27- 2-15	3,652	rig to pump
Union Oil Co., No. 15 Del Rey, Los Angeles Co.	27- 2-15	3,591	sd. sh. drlg.
Del Rey Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,302	cmtd. 5,970
Treasure Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	820	cmtd.
West American Oil Co., No. 2 Bandini, Los Angeles	17- 2-12	1,530	sd. sh. drlg.
Western Gulf, No. 1 Bandini, Los Angeles Co.	16- 2-12	6,971	dry; abd.
Vanco Dev. Co., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,817	suspended
Eyer Pet. Co., No. 1 Torrance, Los Angeles Co.	20- 4-13	....	rigging up
Monarch Oil Co., No. 1 Topanga, Los Angeles Co.	5- 1-16	207	hd. sd. drlg.
Caminol Co., No. 1 Montebello, Los Angeles Co.	9- 2-11	....	location
Texas Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	5,675	hd. sd. drlg.
Texas Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	970	sd. sh. drlg.
Universal Consd., No. 3 Montebello, Los Angeles Co.	5- 2-11	3,280	sd. sh. drlg.
Universal Consd., No. 4 Montebello, Los Angeles Co.	5- 2-11	1,171	sd. sh. drlg.
Woodward Oil Co., No. 1 Montebello, Los Angeles Co.	4- 2-11	3,167	pump 231 b.d.
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	4,491	hd. sd. drlg.
Frontier Oil Co., No. 1 Pico, Los Angeles Co.	7- 2-11	4,486	sd. sh. drlg.
Pressel & Tull, No. 1 Puente, Los Angeles Co.	30- 2-9	4,431	reaming
International Dev. Co., No. 2 Saugus, Los Angeles Co.	34- 5-16	....	foundation
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	1,525	sd. sh. drlg.
Domain Dev. Co., No. 1 Trabuco, Orange Co.	3- 6-7	885	sd. sh. drlg.
Huntington Cent. Oil Co., No. 1 Newport, Orange Co.	29- 6-10	....	rig suspended
Wilshire Oil Co., No. 1 Newport, Orange Co.	29- 6-10	1,947	dry; abd.
Viking Oil Co., No. 1 Richfield, Orange Co.	29- 3-9	3,000	redrlg. 1,280
Hillman & Long, No. 1 San Juan, San Bernardino	2- 3-8	100	sd. drlg.

LA.-ARK. WILDCATS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

Avoyelles Parish

Bell Oil Co.'s No. 2 Thompson-Koltz, 450 ft. S, 350 ft. E, NW cor. Sec. 11-2n-5e. Partly R.U. and S.D.

Southern Star Pet. Co.'s No. 1 O. G. Boyette, Sec. 28-3-5e. S.D. 3,875 ft.

Bienville Parish

N. V. Duncan et al's No. 1 J. Miller, 150 ft. N, 450 ft. E, SW cor. NW Sec. 9-18-7. Set 10-in. 152 ft.; drlg. 324 ft.

Bossier Parish

Ark.-La. Gas Co.'s No. 3 R. O. Roy, 748 ft. N, 1,270 ft. E, SW cor. Sec. 18-17-11. Rigging up.

Bossier G. & G. Co.'s No. 3 Sherrill, 330 ft. N and W, SE cor. Sec. 13-19-12. Drlg. 1,845 ft.

Hawkins & Bird's No. 1 Scanland, 600 ft. S, 200 ft. E, NW cor. SE SE Sec. 32-20-11. Set 10-in. 73 ft.; drlg. 345 ft.

W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W, S cor. NW NW Sec. 3-21-13. Coring 2,652 ft.

Leonard Co.'s No. 1 Pearson, 250 ft. S and E of C Sec. 22-21-14. **T.A. 3,421 ft.**

W. E. Neil's No. 1 Curtis Plant, Sec. 19-17-12. Set 12-in. 200 ft.

Plain Dealing Synd.'s No. 1 Dodson, 330 ft. S and E, NW cor. SW SE Sec. 25-23-13. Coring 2,838 ft.

Producers O. & G. Co.'s No. 1 Edwards, 660 ft. N and W, SE cor. Sec. 27-18-11. Set 12½-in. 208 ft.

R. L. Skidmore et al's No. 1 Davis, Sec. 12-18-13. Reaming to bottom 2,200 ft.; (corrected).

Caddo Parish

Nick Babare's No. 2 Gibbs, 175 ft. E, 275 ft. S, NW cor. NE SE Sec. 16-20-15. W.O.S.R. 2,204 ft.

J. Ed Bailey, tr.'s No. 1 Hartzo, NW cor. NE NW Sec. 28-22-16. S.D. 1,236 ft.

Cal-La. Devel. Co.'s No. 1 Glassell, NW NE Sec. 11-19-15. Abd.; will not drill.

Holly Oil Co.'s No. 1 Thigpen & Herold, Sec. 15-20-15. S.D. 2,283 ft.

F. D. Hyde's No. 1 Thigpen & Herold, 350 ft. S and E, C Sec. 5-15-15. S.D. 1,175 ft.

A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16. Tested S.W.; arranging to deepen from 2,712 ft.

Leonard Co.'s No. 1 Gamm, NE SE Sec. 35-21-15. Set 10-in. 77 ft.; drlg. 1,315 ft.

Leonard Co.'s No. 1 G. Muslow, C NW SE Sec. 17-20-15. Drlg. 550 ft.

Leonard Co.'s No. 2 Dickinson, 1,650 ft. E, 1,330 ft. S, NW cor. Sec. 36-21-15. S.W. and abd. 2,375 ft.

Leonard Co.'s No. 1 Muslow, NE cor. NW NE Sec. 9-20-15. Drlg. 2,199 ft.

Murray Oil Co.'s No. 2 Noel, 495 ft. S, 735 ft. E, NW cor. SW Sec. 15-20-15. W.O.S.R. 2,290 ft.

Press & Lambert's No. 2 Hughes, 350 ft. N and W of C Sec. 15-20-15. W.O.S.R. 2,200 ft.

Puritan Oil Co.'s No. 1 Land, 550 ft. E, 250 ft. N, SW cor. Sec. 4-20-15. Rigging up.

Pyramid O. & G. Co.'s No. 2 Winters, 330 ft. N, 990 ft. W, SE cor. Sec. 4-18-16. Rigging up.

Recovery Oil Co.'s No. 1 W. L. Sibley, Sec. 15-19-14. Dry and abd. 2,482 ft.

A. C. Scott et al's No. 1 Noel Est., 330 ft. S and E, NW cor. Sec. 22-20-15. W.O.S.R. 2,261 ft.

Shreveport Oil Corp.'s No. 5-B Muslow, Sec. 4-20-15.. W.O.S.R. 2,140 ft.

Simplex Oil Co.'s No. 7 Thomas, 200 ft. N and E of C Sec. 15-20-15. W.O.S.R. 2,202 ft.

Texas Co.'s No. 2 Thigpen, 300 ft. S and E, C Sec. 15-20-15. Drlg. 2,191 ft.

Triangle Agency's No. 1 Ellerbe, 872 ft. E, 80 ft. N, SW cor. NW Sec. 4-20-15. Set 10-in. 80 ft.; drlg. 1,310 ft.

C. A. Tooke's No. 1 Kinheman, 581 ft. S, 126 ft. W, NE cor. NW SW Sec. 15-20-15. Rigging up.

Caldwell Parish

G. D. Davis' No. 1 La.-Central Lbr. Co., Sec. 14-11-3e. S.D. 1,800 ft.

G. W. Zeigan et al's No. 1 La.-Central Lbr. Co., 175 ft. S and E, NW cor. SW SW Sec. 25-13-3e. S.D. 1,200 ft.

Catahoula Parish

McIntyre et al's No. 1 Tensas, 1,740 ft. S, 990 ft. E, NW cor. Sec. 18-10-6e. Set 10-in. 347 ft.

Claiborne Parish

E. T. Oakes' No. 1 H. W. Patton Est., 660 ft. S and W, NE cor. Sec. 1-20-5w. S.D. for wtr., 2,271 ft.

Desoto Parish

E. B. Bird et al's No. 1 J. H. Johns, 330 ft. N and W, center Sec. 20-14-6. S.D.; W.O. 2,630 ft.

DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11. Arranging to set csg. 2,590 ft.

P. G. Fraley et al's No. 1 G. R. Stell, 330 ft. S and W, NE cor. Sec. 5-12-16. R.U. and S.D.

Leslie Prod. Co.'s No. 1 Ramsey, 150 ft. N and W of C Sec. 36-11-11. Set 10-in. 45 ft.

National Oils, Inc.'s No. 1 B. Y. Wemple, NW SW Sec. 14-12-11. S.D. 120 ft.

M. L. Stephens' No. 1 Alston, 345 ft. S, 270 ft. W of C Sec. 11-11-16. Set 6-in. 1,405 ft.

East Carroll Parish

Century Oil & Drlg. Co.'s No. 1 Olive Dell, 660 ft. S, 300 ft. W, NE cor. Sec. 56-21-21e. Drlg. 2,850 ft.

Grant Parish

Alexander et al's No. 1 Maxwell, Sec. 9-9-1e. Set 10-in. 60 ft.; drlg. 525 ft.

Jackson Parish

American Liberty Oil Co.'s No. 1 Lusk, C NE NE Sec. 1-16-1w. T.A. 3,827 ft.

La Salle Parish

Fred W. Hensley's No. 1 Urania, Sec. 7-10-2e. Rigging up.

H. L. Hunt, Inc.'s No. 1-A King, 225 ft. S, 210 ft. E, NW cor. NE NW Sec. 36-10-1e. Recmtd. 6-in. 1,524 ft.

Lincoln Parish

Herman L. Brown's No. 1 Monstead, 1,320 ft. S, 660 ft. E of C Sec. 10-17-4w. Drlg. 50 ft.

Madison Parish

San. Land & Exploration Co.'s No. 1 Delta Land Co., Sec. 1-17-12e. Set 12-in. 450 ft.; S.D. 738 ft.

Morehouse Parish

J. H. Gibson, tr.'s No. 1 Thomas, 330 ft. S and W, NE cor. Sec. 16-22-7e. Drlg. 2,300 ft.

Zeiger & Bacon's No. 2 Crossett Lbr. Co., 2,370 ft. N, 505 ft. E, SE cor. SE SW of Sec. 36, in Sec. 41. S.D. 50 ft.

Ouachita Parish

American Liberty Oil Co.'s No. 1 Golson, C NW Sec. 25-17-1e. S.D.; rep. rig, 3,842 ft.

Ark.-La. Gas Co.'s No. 9 McEnery, 1,270 ft. N, 660 ft. E, SW cor. Sec. 21-19-4e. Set 10¾-in. 166 ft.

Carbon Consolidated's No. 1 Mabnet & Piper, 1,672 ft. W, 396 ft. S, NE cor. Sec. 1-18-3e. Moving in rig.

J. E. Farrell & Co.'s No. 5 State of La., 1,693 ft. E, 125 ft. N, N¼ cor. Sec. 22 in Sec. 49-20-4e. Rigging up.

Natchitoches Parish

Clyde Crichton's No. 1 Friedman Est., 405 ft. N, 428 ft. E, SW cor. Sec. 52-7-6. **Arranging run Schlumberger 2,560 ft.**

Ab Jones' No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10. S.D. 1,023 ft.

B. E. Taylor's No. 1 DeBlieux, 1,395 ft. E, 150 ft. S, NW cor. Sec. 33-10-7. Drlg. 300 ft.

Red River Parish

J. S. Tuffree's No. 1 Wilkinson, 1,320 ft. S and W, NE cor. Sec. 11-12-11. S.D. 1,395 ft.

Sabine Parish

G. H. Collins' No. 1-C Cranford, 330 ft. S and E, NW cor. SW NW Sec. 28-9-13. Tested S.W. 2,077 ft.

Hill Myers' No. 1 Magness, Sec. 30-9-13. Set 10-in. 45 ft.

M. T. Hines' No. 1 J. B. Hill, SW NE Sec. 4-6-11. Set 6-in. 2,278 ft.; testing 3,012 ft.

Jack Lent's No. 1 Williams, Sec. 13-7-11. S.D. 1,820 ft.

Lee Whitehead et al's No. 2 Frost Lbr. Ind., Sec. 29-9-13. Comp.; flowing 30 bbls. 1,645 ft.

Union Parish

Carbons Consolidated's No. 2 Feazel, 330 ft. S, 660 ft. E, C Sec. 8-20-3e. Set 10-in. 182 ft.; drlg. 1,950 ft.

Southern Prod. Co.'s No. 1 Clark, 500 ft. N and W, SE cor. NW NW Sec. 17-23-1e. **S.D. 2,396 ft.**

United Carbon Co.'s No. 1 Schwab, 1,320 ft. S and 660 ft. E, NW cor. Sec. 7-20-4e. Set 6-in. 2,090 ft.

Webster Parish

Burnett et al's No. 1 Fulbright, NE NE Sec. 1-18-10. Rigging up.

Winn Parish

Parsons et al's No. 1 Tremont Lbr. Co., 660 ft. S, 330 ft. E, NW cor. SW Sec. 10-12-2w. Drlg. 50 ft.

ARKANSAS

Arkansas County

Grand Prairie Realty Co.'s No. 2 Fischer, 412 ft. S, 12 ft. W, NE cor. NW NW Sec. 6-6-4w. W.O. csg. 118 ft.

Ashley County

Glenn E. McFaddin et al's No. 1 Boreine Farms, 660 ft. S and W, NE cor. Sec. 1-18-8. S.D. 2,800 ft.

Texas-Seaboard Oil Co.'s No. 1 fee, C NW NE Sec. 24-17-4. Drlg. 2,012 ft.

Calhoun County

Hunter Co.'s No. 1 Stout Lbr. Co., 2,077 ft. S, 150 ft. E NW cor. NE Sec. 33-16-13. Drlg. 50 ft.

Columbia County

J. G. Cubage et al's No. 1 Rhea, 150 ft. N line, 330 ft. E, SW cor. SE SE Sec. 12-17-22. S.D. 3,150 ft.

Southern States Gas Co.'s No. 1 Piney Woods Lbr. Co., 330 ft. N and E, SW cor. NE NW Sec. 10-20-22. S.D. 960 ft.

Hempstead County

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26. S.D. 1,992 ft.

F. W. Martin's No. 2 Lafferty, C NW Sec. 17-14-24. Rigging up.

LaFayette County

Earl F. Fox' No. 2 Coleman Bros., NE NE Sec. 30-16-24. **Rigging up.**

Kamon & Neely's No. 1 Cockran, NW cor. SE SW Sec. 26-19-25. S.D. 4,450 ft.

Transportation Petroleum Co.'s No. 1 Cockran, 300 ft. S and W, NE cor. SE Sec. 26-19-25. **Set 10-in. 215 ft.**

Miller County

M. D. K. Fitzwater's No. 1 E. H. Beck, 150 ft. N and E, SW cor. NW SW Sec. 34-15-26. W.O.S.R. 2,919 ft.

King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28. S.D. 3,167 ft.

King Oil Corp.'s No. 1 Anderson, 350 ft. E, 200 ft. S, NE cor. SW NE Sec. 16-14-27. S.D. 2,573 ft.

Magnolia Pet. Co.'s No. 8 Olivet, 336 ft. S and W, NE cor NW NW Sec. 3-16-26. Comp. pumping 330 bbls., 2,942 ft.

Frank Roe et al's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26. Set 10-in. 120 ft.

Snowden & Hill's No. 1 E. H. Beck, 255 ft. E and 330 ft. S, NW cor. SW SW Sec. 34-15-26. Drlg. 2,815 ft.

Lee Timberlake's No. 2 Frost Est., Sec. 27-15-25. Dry and abd. 2,450 ft.

Nevada County

Carnett et al's No. 1 Floyd Munin, C SW Sec. 16-14-22. S.D. 50 ft.

Ouachita County

McCullough-Brown, Tr.'s No. 1 Rowe, Sec. 2-12-19. Drlg. 1,994 ft.

Snow-Black Pet. Co.'s No. 1 Bedford, 660 ft. N and 150 ft. E, SW cor. Sec. 32-11-18. Set 8-in. 1,000 ft.; T.D. 1,002 ft.

Poinsett County

Rockwell Development Co.'s No. 1 W. A. Smith, NE NE Sec. 13-11n-3e. Drlg. 715 ft.

Union County

Gardy Drlg. Co.'s No. 1 Craig, Sec. 35-17-15. **Testing 2,211 ft.**

Gulf Ref. Co.'s No. 49 L. Werner, 4,620 ft. N, 60 ft. E, SW cor. Sec. 5-16-16. **Drlg. 7,919 ft.**

H. L. Hunt's No. 15 E. F. Gregory, 330 ft. N and W, SE cor. Sec. 10-17-14. T.A. 3,478 ft.

H. L. Hunt's No. 18 E. F. Gregory, 330 ft. N and E, SW cor. Sec. 11-17-14. Abnd.; will not drill.

Mrs. R. K. Jones et al's No. 1 Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14. Arranging to test 3,297 ft.

Marine Oil Co.'s No. 5-E Thompson, Sec. 10-18-13. **Comp. flowing 516 bbls., 2,567 ft.**

C. E. Murdock's No. 1 Pumphrey, C SW NW NE Sec. 11-17-14. Derrick.

F. F. Roberts et al's No. 1 Galion Lbr. Co., 330 ft. S and E, NW cor. NW SE Sec. 10-16-14. **Set 10-in. 104 ft.**

MISSISSIPPI

Amite County

Mineral Resources, Inc.'s No. 1 Anderson
C NE NW Sec. 14-3n-7e.
S.D. 550 ft.; taking new leases.

Bolivar County

White & Jones' No. 1 Bailou. SE SE NW Sec. 17-24n-7w.
Drlg. 1,320 ft.

Clarke County

L. Beckwith et al's No. 1 Long Bell Lbr. Co., 535 ft. S. 125 ft. W of C Sec. 10-2n-16e.
T.A.; lack of funds.

Clarke County Oil Co.'s No. 1 Dora Butler, C SW SW Sec. 15-2n-14e.
Set 10-in. 63 ft.

Harrison County

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
S.D.; W.O. 1,100 ft.

Hinds County

Weaver & Alexander's No. 2 Walthall, Sec. 25-4n-1e.
Set 8-in. 772 ft.; arranging to set 5-in. 2,441 ft.

Lauderdale County

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
S.D.; W.O. 1,600 ft.

Monroe County

P. J. McAlpine's No. 1 Frank Rye, Sec. 15-15s-17w
S.D.; W.O. 2,527 ft.; (corrected).

P. J. McAlpine's No. 1 Crook, 1,090 ft. S 90 ft. W. NE cor. Sec. 15-13s-13w.
Arranging set 6-in. 2,502 ft.

Rankin County

Cleve Love et al's No. 1 Ascher, 520 ft. S and E. NW cor. NE NE Sec. 18-5n-2e.
S.W. and abd. 2,477 ft.

Simpson County

Berry Corp.'s No. 2 R. T. Berry, Sec. 33-2n-4e.
T.A. 2,510 ft.

Warren County

H. W. Elliott et al's No. 2 R. L. Parker, 780 ft. E. 1,570 ft. S. NW cor. Sec. 14-14n-1e.
S.D.; high wtr. 1,600 ft.

Washington County

Perkins & Dees' No. 1 Lee, 1,500 ft. E. 500 ft. N. SW cor. Sec. 33-15n-3w.
S.D. 2,175 ft.

Winston County

Jack Vale et al's No. 1 Moody, 712 ft. N. 667 ft. E. SW cor. NW SW Sec. 3-13n-14e.
S.D. 2,250 ft.

ALABAMA

Covington County

Geometer Prod. Corp.'s No. 1 Culbreath, SW cor. SW NE Sec. 8-2n-14e.
S.D. 4,300 ft.

Houston County

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
S.D. 2,776 ft.

Lamar County

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w
Drlg. lime 4,535 ft.

FLORIDA

Lake County

Oil Dev. Co. of Florida's No. 1 South Lake, SE SE Sec. 17-24s-25e.
S.D. at 1,946 ft. after coring 75 ft. of lime; awaiting acid treatment.

Walton County

Geometer Oil Corp.'s No. 2 Walton Land & Timber Co., Sec. 10-1s-19w.
Location abd.

LA.-ARK. PROVEN
NORTH LOUISIANA

Caddo—Bodcau

Haynes Prod. Co.'s No. 1 W. B. Lawton, 1,980 ft. N and E. SW cor. Sec. 14-23-16
Drlg. 3,221 ft.

Haynes Prod. Co.'s No. 1 Harry Otwell, 660 ft. N, 560 ft. W, SE cor. Sec. 15-22-16.
Set 13⅜-in. 245 ft.; drlg. 565 ft.

Haynes Bros. Drlg. Co.'s No. 1 Tyson, 660 ft. S and W of C Sec. 24-23-16.
Coring 5,480 ft.

Ark-La Gas Co.'s No. 1 J. S. Teamer, 330 ft. N and 660 ft. W, SE cor. SW SE Sec. 12-23-16.
Drlg. 2,336 ft.

R. W. Norton's No. 1 Caddo Levee Board, 660 ft. N and W, SE cor. NE Sec. 21-23-16.
Set 13⅜-in. 440 ft.; drlg. 850 ft.

O'Brien Brothers' No. 1 Rodessa Oil & Land Co., 660 ft. S and 330 ft. E, NW cor. SW Sec. 14-23-16.
Set 13⅜-in. 591 ft.; drlg. 960 ft.

Pelican Oil & Gasoline Co.'s No. 1 Sexton, 629 ft. S and W, NE cor. SE Sec. 14-23-16.
Drlg. 2,840 ft.

D. C. Richardson's No. 1 Caddo School Board, C S Line NE SW Sec. 23-23-16. Derrick.

United Gas Public Service Co.'s No. 1 W. M. Bremer, 1,980 ft. N and 660 ft. E, SW cor. Sec. 22-23-16.
Set 13⅜-in. 716 ft.; drlg. 1,581 ft.

United Gas Public Service Co.'s No. 1 Gibson Est., 660 ft. N, 1,980 ft. W, SE cor. Sec. 15-23-16.
Rigging up.

United Gas Public Service Co.'s No. 1 Rodessa Oil & Land Co., 1,980 ft. N and 660 ft. W. SE cor. Sec. 15-23-15.
Rigging up.

United Gas Pub. Ser. Co.'s No. 1 Thomas Unit, 634 ft. S, 1,962 ft. E, NW cor. Sec. 23-23-16.
Set 16-in. 795 ft.; drlg. 3,225 ft.

United Gas Public Service Co.'s No. 1 D. F. Barr, 1,320 ft. N, 1,551 ft. W, SE cor. Sec. 29-22-14
Comp.; 58,000,000 ft. gas, 6,052 ft.

United Gas Public Service Co.'s No. 1 I. L. Young, C NW SE Sec. 21-23-16.
Comp.; flowing 6,000 bbls., 6,048 ft.

Sabine Parish—Zwolle

Alexander & Crane's No. 1 Fogman, SE cor. N½ SW NE Sec. 18-7-11.
S.D. 2,655 ft.

Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. 2,670 ft.

H. C. Maulding's No. 1 Davis, 350 ft. N and W. SE cor. NE NE Sec. 2-7-11.
Drlg. 300 ft.

K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. SW NW Sec. 2-7-9.
Location.

Texas Co.'s No. 1 Mary Cutrer, 666 ft. W, 671 ft. N, SE cor. NE Sec. 11-7-11.
Dry and abd. 2,850 ft.

Texas Co.'s No. 8 E. Stille, 330 ft. S, 340 ft. E. NW cor. NE Sec. 3-7-11.
Set 10-in. 55 ft.; drlg. 3,010 ft.

Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 3-3-12.
S.D. 2,742 ft.

EAST TEXAS
(Border Counties)

Harrison County

R. C. Payne et al's No. 1 Lowery, H. D. Spain Sur.
P.B. to 3,524 ft.

Marion County

Ed S. Holman's No. 1 Henderson, R. Bennington Sur.
P.B. to 2,443 ft.

Panola County

R. A. Graddy's No. 1 M. J. McCormick, J. McAdams Sur.
Moving in rig.

George Hudson et al's No. 1 J. F. Nail, C. McGeary Sur.
Set 8-in. 40 ft.; fishing for core bbl. at 2,345 ft.

Geo. Le Grand's No. 1 P. J. Wardleigh, A. Thompson Sur.
Set 10-in. 62 ft.

R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Set 10-in. 64 ft.

Fred Stovall Drlg. Co.'s No. 1 H. D. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

Shelby County

Cliff Stoval's No. 1 Pickering Lbr. Co., C. H. Patterson Sur.
S.D.; rig repair. 1,485 ft.

S. W. TEXAS WILDCATS
Week Ending August 10

Atascosa County

Robert McIntyre's No. 1 Billimels, 1,104 ft. SW line, 3,700 ft. SE line, J. D. Woodruff Sur. No. 246.
Location.

Bandera County

Miam Drlg. Co.'s (Plateau Oil Co.) No. 1 Garrison, G.C.&S.F. Sur. No. 506, 1,500 ft. from W and 2,976 ft. from N lines of survey.
Hole caving; will set csg.

Palm Winn Oil Co.'s No. 1 Watson, 600 ft. N of center line, Sur. 71 (workover).
S.D. 1,750 ft.; T.D.

Bastrop County

Marts & Beavens' No. 1 Leatherwood, 220 ft. from NW line and 550 ft. from NE line, Wm. McLanglin Sur.
Drill stem test 3,220-3,280 ft.; no oil or gas; T.D. 3,288 ft.; abnd.

Joe Mills et al's No. 1 American National Bank of Austin, R. Gage Sur., 150 ft. NE line, 2,300 ft. SE line of survey.
Derrick.

Bee County

G. M. Church's No. 1 J. C. Woods, 330 ft. from N line, 330 ft. W of road, J. Ryan Sur., H.&G.N.R.R., Abstract 186.
Coring 5,322 ft.

Grisham et al's No. 1 Ansberger, 330 ft. of S and W lines of 155-ac. tract, Sec. 1.
Drlg. 2,430 ft.

Henderson Coquat et al's No. 1 Baily; ½ mile W Mineral.
Top Hockley 3,080 ft.; drlg. 3,411 ft.

F. P. Hynes' No. 3 Plummer, F. J. Cheesman Sur. 1, 40 ft. W of No. 1.
No report.

Rube Heflin's (McMurray) et al No. 1 Holzmark, 330 ft. from N and E lines of lease.
T.D. 4,131 ft.; abnd.

D. V. Smith et al's No. 1 Atkins, M. M. Wood Sur.
Rig.

Bexar County

Cherokee Drlg. Co.'s No. 1 Chapman, 2,100 ft. from S line, 3,200 ft. from E line, A. J. Leslie Sur.
S.D. 400 ft.

Fay Chew's No. 1 Jones, 1,650 ft. E line, 150 ft. N line, A. Thompson 50-ac. tract, Jacinto Pena Sur. No. 9.
Standing; T.D. 720 ft.

Fay Chew's No. 2 Jones, 1,025 ft. E line, 150 ft. N line, A. Thompson 50-ac. tract, Jacinto Pena Sur. No. 9.
Drlg. 469 ft.

Fay Chew's No. 5 Jones, Sec. 9, Pena Sur., 1¼ miles E of Adkins.
Drlg. 256 ft.

Jack Couch's No. 2 Banezan, J. S. Simpson Sur., 150 ft. NE line, Wetz 102-ac. tract.
Drlg. 521 ft. shale.

Jas. B. Cunningham's No. 1 L. F. Ridder, 950 ft. S of Nelson Road, 1,300 ft. from E line, Block 5,196, Sur. No. 58.
Drlg. sand 520 ft.

Derine Oil Co.'s No. 2 Indyk, 600 ft. E line, 400 ft. S line, Blk. 4.
Show oil 605 ft.

Dunham & McClure's No. 1 S. A. Seiner Pipe Co., 600 ft. S line, 330 ft. W line, 53-ac. tract, E. Brown Sur.
Set sur. csg.; W.O.C.

C. J. LeComte's No. 1 Herbst, 150 ft. out of SW cor. of Manuel Leal Sur.
Rigging up to deepen, 360 ft.

McPhee & Briggs' No. 1 F. Lamb, 9,200 ft. from S line, 800 ft. from W line of Sur. No. 3 (Manuel de Luna).
T.D. 2,337 ft.; chalk; reamed; ready to run 6-in. csg. to 2,315 ft.

Mid-Texas Prod. Co.'s No. 1 C. G. Walker, 330 ft. out of NE cor. Lot 21, S. M. Dobie Sur. No. 79; drlg. Glen Rose lime 10-in. csg. set at 1,150 ft.; T.D.; S.D. 1,387 ft.

Morgan & Magna's No. 1 Kirkwood, Desaque Sur., 9 miles SW of San Antonio.
Location.

Carroll C. Raborn's No. 1 Claude McCauley, 150 ft. from N and NW lines of tract in Sec. 52, Wm. Harrison Sur.
S.D. 950 ft.

C. C. Raborn's No. 1 Palfrey, 2,000 ft. W of Salado Creek, 2,500 ft. from S line, Alamiz League.
Location.

C. C. Raborn's No. 1 A. B. Stephens, 1,620 ft. from N line, 1,540 ft. from W line of tract, P. B. Hayes Sur. No. 3.
S.D. 415 ft.

Richards Oil Co.'s No. 1 Russell, 1,000 ft. E line, 140 ft. S line Rodriguez Sur.
Drlg. 1,153 ft.

Blanco County

H. R. Roe and W. E. Nixon's No. 1 Polk Morrisey, 2,000 ft. from W line, 1,000 ft. out of SE cor., 1,600 ft. from N line of Thomas H. Webb Sur. No. 91.
T.D. 370 ft.; S.D.

M. O. Roger's (Detroit-Texas Dev. Co.) No. 3 Dunlap, 300 ft. SE line, 1,300 ft. NE line Dunlap 105-ac. tract, Stephen F. Sanches Sur.
Show oil 2,129-80 ft.; T.D. 2,090 ft.

Caldwell County

O. W. Killam's No. 1 Moore, 1,566 vrs. SW line, 775 vrs. SE line, Joseph Burleson, Sr. Sur.
T.D. 2,129 ft. chalk; dry and abnd.

Cameron County

Joseph Anderson's No. 1 Browne, Blk. 379, 3 miles N Rio Hondo.
Spudded in.

Dewitt County

Reginald F. Baurke's No. 1 W. C. Steinman Est., 927 ft. from N and S lines, Uriah Blue 1-3 League.
T.D. 115 ft.; S.D.

J. C. Crossman's No. 1 Kleberg, 2 miles NW Cuerro (old test).
T.D. 80 ft.; S.D.

D. G. Glaspier's No. 1 Schuebel, 330 ft. from S and W lines of tract, Fitzgerald grant.
Spudded in; S.D.

Dimmitt County

Diamond Half Oil Co.'s No. 1 Eardley Est., 2,390 ft. SW line, 330 ft. NW line, E. A. McCorquodale Sur. No. 6.
Location; drlg. wtr. well.

Joe Lundin's No. 1 Nueces Sand, 330 ft. NE line, cor. Lot 16, Blk. 7.
Location.

Duval County

Atkins & O'Neill's No. 1 Clara Driscoll Sevier, 2,640 ft. from N, E and W lines of Sec. 7, T.&N.O. R.R. Co. Sur.
Spudded.

J. H. Chandler's No. 1 Rita Pena, 1,335 ft. of NW line, 3,825 ft. of SW line, Share 4, Mesquite grant.
Drlg. 1,827 ft.

M. E. Davis' (Benedum & Trees) No. 1 G. B. Parr, 6,600 ft. from N line, 3,960 ft. from W line of tract, San Andres grant.
T.D. 2,135 ft.; blew in wild; est. 20,000,000 ft. gas.

Magnolia Pet. Co.'s No. 1 D.C.R.C., 330 ft. from S & E lines of Sur. 100.
Drlg. 1,859 ft.

Marzo Oil Co.'s No. 1 E. R. Hagist, 150 ft. from E line, 330 ft. from N line, Sec. 269, Blk. 5, Beaty, Seale & Forward Sur.
Coring 2,413 ft.

Stanolind Oil & Gas Co.'s No. 1 Farmers Life Ins. Co., 3,987 ft. of E line, 330 ft. of N line, E. R. Gray Sur., Sec. 416.
T.D. 6,152 ft.; dry and abnd.

Fayette County

Ross Fenton's No. 1 Kasper (263-ac.), 3,000 ft. from NE line, 1,320 ft. from SW line, of Thos. Green Sur. No. 28.
S.D.

Frio County

Amerada Pet. Corp.'s No. 1 Smith, 4,552 ft. NE line, 1,550 ft. SE line, J. V. Mason Sur.
Top Georgetown 6,077 ft.; Edwards 6,186 ft.; T.D. 6,238 ft.; P.B. to chalk.

W. D. Bacon's No. 1 Burns, 2,500 ft. S and W line, Thomas Clifton Sur.
Moving in material.

Midland Oil Co.'s No. 1 San Antonio Joint Stock Land Bank, 300 ft. from NE and SE lines of 40-ac. tract, B.S.&F. Sur.
T.D. 3,860 ft.; dry and abnd.

Goliad County

Brown & Wheeler, Inc.'s No. 1 Mrs. Jennie Ray Kauffman, 1,650 ft. from NW line, 330 ft. from NE line of 4,265.06-ac. tract.
Comp.; T.D. 4,538 ft.; 10 bbls. per hour, through ¼-in. choke; C.P. 1,600 lbs.; T.P. 1,550 lbs.

Hendricks et al's No. 1 Gillette, 330 ft. of NW and SW lines of tract, G. Gomez Sur.
Location.

Keystone Royalty Co.'s No. 1 M. Woods, SW part of county, 15,000 ft. from SW line, 5,000 ft. from NW line of J. Sherman Sur.
T.D. 5,960 ft.; fishing for core barrel.

Sun Oil Co.'s No. 1 Scarborough, 1,520 ft. SE No. 3, Sec. 25, Talley & B.B. Sur.
Drlg. 3,012 ft.

Gonzales County

Amerada Pet. Co.'s No. 1 Union Central Life, 800 ft. of SW line, 330 ft. of SE line, 122-ac. tract, Hendricks Sur.
Drlg. 312 ft.; S.D.

S. W. Forrester Oil Co., Inc.'s No. 1 Stein, 475 ft. of SW line, 1,033 ft. of SE line, 311-ac. tract, Bane Sur.
Rig up.

Resource Prod. Co.'s No. 1 Lanbeck, 760 ft. from NW line, 1,919 ft. from SW line, J. M. Salinas Sur.
Spudded in; S.D.

Guadalupe County

J. E. Clark's (H. H. Weinert) No. 1 Lay, 800 ft. along road from SW cor., thence 150 ft., J. K. Davis Sur.
T.D. 2,446 ft.; chalk; est. 10 bbls.; cleaning.

Grace et al's No. 1 Ogletree, 400 ft. SE line, 1,600 ft. SW line, 404-ac. tract, Robert Smith Sur. No. 15.
Redrig. old well; R.U.; S.D.

Bob Gode et al's No. 1 Hicks, 1,320 ft. from E line, 150 ft. from S line of 189-ac. tract in Santo Y. Coy Sur.
T.D. 800 ft.; lime; S.D.

J. Harper's No. 1 Flucher, 220 ft. NE line (Creek), 150 ft. NW line tract, Robert Smith Sur. No. 15.
Rigging up.

Inter-Allied Pet. Co.'s No. 1 Wells, 1,705 ft. NE line, 175 ft. SW line, Sec. 3, 80-ac. tract, Sur. 3.
Location.

Mineral Oil Corp. of Texas' No. 1 Allen Phillips, 162 ft. from N line, 900 ft. from E line of tract, Cortinos Sur.
T.D. 888 ft.; standing.

W. T. Scrutchin's No. 1 A. H. Smith, 150 ft. from E line, 1,350 ft. from N line of 34.5-ac. tract, Jas. B. Cowan Sur.
Standing; T.D. 825 ft.

J. S. Suttle's No. 2 Baenziger, S of Seguin. Old well; R.U. to W.O.

Suttle et al's No. 1 Baenziger, 700 ft. from S line, 500 ft. from E line of 125-ac. tract, Monsola Sur.
T.D. 2,156 ft.; whipstocked at 1,310 ft.; drlg. at 1,507 ft. in sidetracked hole.

Hidalgo County

Bluff Pet. Co.'s No. 1 Porcion Land Co., 330 ft. from N and E lines of NE 160 acres of S 500 acres of Share 14, Por. 49.
T.D. 5,539 ft.; cleaning out to deepen.

Deering & Kayser's No. 1 Engelman, Lot 3, Blk. 70, Las Mestenas tract.
T.D. 7,508 ft.; P.B. sand 6,740-50 ft.; comp.; 25,000,000 ft. gas spraying distillate.

Downey & Morton's No. 1 Daskom, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45.
Liner cmtd.; cleaning out.

E. H. East's No. 1 Scarbrough, 150 ft. from S line, 1,150 ft. from E line of Blk. 14, East Retema Subd., Tule Grant.
T.D. 1,227 ft.; S.D.

Maddox & Walter's No. 1 John H. Shary, 308 ft. from SE line, 440 ft. from SW line of Blk. 21, Porcion 58.
Drlg. 5,972 ft.

Madox Turnbull & Irwin's No. 1 J. H. Shary, 320 ft. N and E lines of Tract 21, Porcion 59.
Drlg. 5,435 ft.

Mundy & Son's No. 1 Guerra, 353 ft. from W line, 1,275 ft. from N line of Tract 12, Porcion 41.
Set surface csg.; W.O.C.

Jim Hogg County

Miller & Pippin's No. 1 Yeager, 527 ft. S line, 150 ft. E line of Blk. 6, Sur. 20.
Fishing 3,630 ft.

A. W. Phillips' No. 1 Allen, 660 ft. from S and E lines of Blk. 293, Pippin Subd. of the Randado grant.
T.D. 42 ft.; standing.

G. C. Rankin et al, NW cor. Lot 6, Sec. 5, M.I.M.

Jim Wells County

Sunray Oil Co.'s (A. M. Hagan) No. 1 Robert Adams, 330 ft. N and E of SW cor. Sec. 10, M. Ruiz Sur.
T.D. 5,001 ft.; abnd.; sand 2,819-33 ft.; sulphur water.

Karnes County

Marts Pet. Co.'s (Harris & Jecker) No. 1 Cochran, 150 ft. from S line, 360 ft. from

E line, McConnel League.
Drlg. 217 ft.

Marzo Oil Co.'s No. 1 Thane, 330 ft. from S & E lines of W half of N 160-ac. of 280-ac. tract in F. Ruiz Sur.
Jackson 460-75 ft.; drlg. 1,913 ft.

Harry Sample's No. 1 Seeger, 330 ft. from W line, 330 ft. SW of road, J. Pointevent Sur.
S.D. 2,008 ft.

R. G. Tonkin's No. 2 Henke, 3,670 ft. from SW cor., 330 ft. from W line (location changed).
Location.

Kendall County

J. C. Freeman's No. 1 J. M. Gerffers, 1,200 ft. out of SW cor. of 119-ac. tract, Mark Hodgson Sur., Sec. 796.
T.D. 102 ft.; S.D.

Southwestern Dev. Co.'s No. 1 Werner, 765 ft. W line, 1,645 ft. N line, J. F. Torrey Sur. No. 781.
Set 8-in. csg. 530 ft.; drlg. 668 ft. in lime.

Kerr County

Eastland Oil Co.'s No. 5-E Love, 1,580 ft. E line, 300 ft. N line, Sur. 1,591.
Set csg. 5,623 ft.; to drill deeper.

Emerald Oil Co.'s (Meteor Oil Co.) (Edminton & Walker) No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.W.T. Sur.
S.D. in lime 800 ft.

G. F. Schreiner et al's No. 3 Jeff Love, 1,500 ft. SE of No. 1 and 1,530 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
T.D. 5,625 ft.; porous lime; S.W. 5,622-25 ft.; S.D.

Kleberg County

Harry Clark's No. 1 Rodgers, Lot 5, Blk. 36.
S.D. 750 ft.

Fidelity & Culbertson Exploration Co.'s No. 1 Kivlin, Blk. 39, Lot 4, K.T.&I. Sur.
Location.

Fidelity Expl.'s No. 1 Henry, Lot 2, Sec. 49, K.T.&O. Sur.
Drlg. 2,980 ft.

Parr & Ponder's No. 1 Sam Michalk et al, 330 ft. from N line and 775 ft. from S line, Blk. 37, Sec. 5; 5 miles SE Kingsville.
T.D. 2,000 ft.; S.D.

LaSalle County

Joe Danciger (Killingsworth Oil Co.'s) No. 1 Yeager, Sur. 94, 100 ft. from W line, 300 ft. from N line of Sec. 94, Blk. 5, Lot 10.
T.D. 2,001 ft.; abnd.

Lee County

McNeill Pet. Co.'s No. 1 Beatty, 3,700 ft. from SW line, 4,200 ft. from SE Line, Wm. Nichols Sur.
Made sulphur water at 3,367 ft.; plgd. back 20 ft. to test; abnd.

McNeill Pet. Co.'s No. 2 Beatty, 650 ft. SW of No. 1.
Location.

Scharbach & Stoe's No. 1 Robert Otto.
T.D. 2,450 ft.; S.D.

Live Oak County

Aransas Oil Co.'s No. 1 Reed, 330 ft. E line, 1,320 ft. S line, Spicer Sur. No. 70.
Drlg. 797 ft.

Mills Bennett Prod. Co.'s No. 1 Watson et al, 3,653 ft. NE cor. of L. D. Camp tract, then 990 ft. N line of tract, Pablo Salinas Sur.
Sand 4,699-4,711 ft.; drlg. 5,323 ft.

E. H. Buchner's No. 1 McNeill, 300 ft. of SW cor. of 40-ac. tract, Blk. 8, McNeill Subd.
Location.

Earl Calloway's No. 1 Lyne, 895 ft. of W line, 330 ft. of N line, SW¼, SW¼ of M. M. Lyne Sur.
Location.

Earl Calloway's No. 1 George West hrs., Sec. 255, B.S.&F. Sur.
Drlg. 2,632 ft.

Conway & Buescher's No. 1 Sanger, 330 ft. N of center of NW line of Sur. 224 in Sur. 383.
Location.

Henderson Coquat's No. 1 Reagan, McGloin Sur., E of Nueces River and S of Oakville.
Drlg. shale 1,760 ft.

Lucky Strike Oil Co.'s No. 1 Sails, 150 ft. SE cor., Blk. 114, Scrugham Sur.
Set Surface csg.; W.O.C.

G. A. Pinkley's No. 1 Jacob Corp., NE¼ SE¼ Sec. 3, G.H.&H. Sur.
Location.

Maverick County

Thompson & Sheeter's No. 1 Wipff, 330 ft. W line, 1,800 ft. S line, Sec. 18.
Drlg. 233 ft.

McMullen County

Bussa Oil Co.'s No. 1 F. B. Horton, center of E½ of NW¼ of S 640-ac. of J. M. Jean Sur. No. 29.
S.D. 615 ft.; changing rig.

John O. Gibson's No. 1 Mazur & McDowell, 330 ft. from N and W lines, Sec. 19, Blk. 4, H.T.&B. Sur.
T.D. 1,810 ft.; abnd.

J. O. Gibson's No. 1 G. C. West (Lowe), 150 ft. E line, 1,200 ft. S of NW cor. of Lot 1, Blk. 4, H.T.&B. Sur.
S.D. 465 ft.

Howard & Carpenter's No. 1 Jungman, 1,030 ft. from E line, 950 ft. from S line, Hely Sur.
S.D. 1,205 ft.

Chas. A. Hall's No. 1 B. C. Claunch, 368 ft. from N line, 160 ft. from E line of 25-ac. tract, Michael Haley Sur.
Location.

Illinois Pet. Co.'s No. 1 Atkinson, 1,650 ft. S line, 330 ft. W line 80-ac. tract, Martha J. Deen Sur.
Spudding in.

La Jita Corp.'s No. 1 King, C SE¼ SW¼ Sec. 22.
Rigging up.

Points et al's No. 1 Fahler, 422 ft. S line, 819 ft. E line of tract, Byrna pasture.
T.D. 1,004 ft.; S.D.

Texlo Oil Co.'s No. 1-B Atkinson, center of NW¼ NE¼ Sec. 96, R. C. Lomax Sur., 3 miles NE Loma Alta Field.
Location abnd.

Medina County

F. Brown's No. 1 Brucks, 900 ft. W line, 660 ft. S line, Brucks tract, John Ward Sur.
Spudded in.

Joe Dupree's No. 1 Batto, 258 ft. from E line, 957 ft. from N line, J. Ball Sur. No. 1,478.
T.D. 460 ft.; cleaning.

Letro Oil Corp.'s No. 1 E. B. Forrest, 1,928 ft. from N line, 1,908 ft. from E line of 640-ac. tract, Blk. 69.
Cmtd. sur. csg. 70 ft.; drlg. plug.

W. T. Shoemaker's No. 1 Noonan, 52.5 ft. S 2 deg. 20 ft. E of old well, Sec. 349, M. Simon Sur.
S.D. 700 ft.; lime.

Nueces County

N. M. Wilson's No. 1 J. C. Bluntzer, SE cor. of tract, Casa Blanco Grant.
Rig.

Real County

H. J. Heartwell et al's No. 2 Mrs. M. S. Perry, 250 varas from NW line, 775 varas from SW line of A.B.&M. Sur. No. 175.
Drlg. sidetracked hole 3,121 ft.

San Patricio County

Masterson et al's (Tom Graham) No. 1 Wurzbach, 330 ft. from W line, 4,350 ft. from S line of C. C. Hornsby Sur.
Standing 5,521 ft.

Willis Storms' No. 1 Hobbs, 877 ft. S and 47 deg. 30 min. E from W corner of 50-ac. tract, N 42 deg., E 622 ft. to center of tract, Delgado Sur.
Drlg. water well.

Starr County

C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E lines of Sec. 6 (NE part of county).
Fishing 3,517 ft.

Nix et al's No. 1 S.C.C.C., 150 ft. from S and W lines of Blk. 53, Jeffries Lambeth Subd.
No report.

Pedernal Oil Co.'s No. 1 Hicks et al, 187 ft. from NW line, 318 ft. from NE line of Blk. 6, Pedernal Grant.
T.D. 2,210 ft.; S.D.

Pedernal Oil Co.'s No. 1 S. Welsh, 630 ft. NE cor. Blk. 3, Pedernal grant.
Drlg. 657 ft.

Travis County

R. C. Hill's No. 1 S. A. Johnson, 1,473 ft. from SE line, 305 ft. from NE line of 80-ac. tract, John W. Haun Sur.
Top Serpentine 730 ft.; T.D. 860 ft.; S.D.

Bolling & Pew's No. 1 Lungren Est., R. E. Lundgren 113-ac. tract, Samuel Kimbro Sur.
Drlg. shale 580 ft.

G. A. Artz & Co.'s No. 1 Rolff, 454 ft. N line, 207 ft. W of tract, Hancock Sur.
Drlg. 650 ft.; shale.

Swearingen & White's No. 1 Edwin Carlson, Hann Sur.
T.D. 1,200 ft.; abnd.

Webb County

Arthur H. Wray's No. 1 Geo. Stuempke, Share 1, Brewster pasture, Galan grant.
S.D. 1,125 ft.; new rig; to deepen.

E. T. Burton's No. 1 Billings, NE cor. of SW¼, Sur. 113.
Location.

J. E. Neal's No. 1 Laurel Bros., 1,320 ft. of S and E lines, Sur. 1,119.
Location.

Willacy County

W. T. Daniel's No. 2 Armendiax, near Rio Hondo, 7,798 ft. from E and W lines of Share 14.
S.D. 3,850 ft.

Kingwood Oil Co.'s No. 1 Santa Rosa, Inc., 160 ft. from E line, 637 ft. from S line of Sec. 30, Blk. 16, Share 44, San Juan de Carricitas grant.
Drlg. 5,721 ft.

Williamson County

Fuchs & Walter's No. 1 G. Allman, John Bevil Sur. No. 56, 150 ft. from SW line, 300 ft. most westerly SW line of 264-ac. tract.
Lost hole 875 ft.; will drill new hole.

H. B. and Otto Glass' No. 1 Albert, 3 miles SE of Taylor.
Drlg. 192 ft.; shale.

H. L. Goff et al's No. 1 Albert Klotz, 1,700 ft. from N line, 150 ft. from E line of 100-ac. tract, W. Cartwright Sur.
S.D. 1,250 ft.

Hays et al's No. 1 Pfluger, 150 ft. from E line, 150 ft. from S line, White Sur.
S.D. 915 ft.

Kothmann et al's No. 1 Albert Krueger, John Bevil Sur. No. 56, 1,400 ft. from NW line, 1,060 ft. from SW line, 118-ac. tract.
Drlg. 559 ft.

Rue et al's No. 1 Chas. Bachmayer, 6 miles SE Taylor.
T.D. 800 ft.; csg. parted; fishing.

J. M. Russell's No. 4 Nelson Est., 550 vrs. NE line, 150 vrs. SE line, J. L. Justice Sur. No. 2.
Drlg. 604 ft.; Glenrose lime.

Zapata County

F. H. Crow et al's No. 1 Daniel Yzaguirre, 330 ft. out of SW cor. Share 1, Porcion 14-15-16, D. Yzaguirre tract.
Lost drill stem 3,017 ft.; abnd.

Kimerow Co.'s No. 1 Santos, 330 ft. N and W lines, Blk. 26, La Huerta grant.
Drlg. 1,557 ft.

Joe Palmer's No. 1 Emma A. Markrud, 150 ft. from NE and NW lines, Blk. 22, Sur. No. 616.
Drlg. 917 ft.

Texas Royalty Investment Co.'s No. 1 N. J. Vela, 636 ft. from NE line, 300 ft. from NW line, Blk. 7, Por. 29.
S.D. 2,360 ft.

S. W. TEXAS PROVEN

Week Ending August 10

Carroll—Bastrop County

Nelson Puett's No. 5 Carroll Estate, 1,926 vrs. (5,350 ft.) from NW line and 619.20 vrs. (1,720 ft.) from SW line of Andrew Mayes Sur. No. 19.
T.D. 2,385 ft.; abnd.

Fay Wilson et al's No. 1 Calahan, 7,700 ft. from NW line, 350 ft. from SW line, Mays Survey.
S.D. 325 ft.; laying wtr. line.

Bateman—Bastrop County

Batts & Jarnson's No. 1 Mrs. Annete Harris, 576 vrs. (1,600 ft.) NW line, 630 vrs. (1,750 ft.) SW line, John Maxmillan Sur. 22.
Top Dale lime 2,136 ft.; base lime, top sand 2,192 ft.; T.D. 2,200 ft.; small show oil; testing.

Caesar—Bee County

Commodor Oil Co.'s No. 3 Grissom, 450 ft. E of No. 1.
Spudding in.

Luling Oil & Gas Co.'s No. 9-B Ruhman, 1,180 ft. from NW line, 150 ft. from SW line of Blk. 40, Hodge Sur.
T.D. 3,059 ft.; comp.; 140 bbls.; T.P. 210 lbs.; C.P. 475 lbs.

El Toro Oil Co.'s No. 1 J. J. Grissom, 150 ft. from N and W lines of 10-ac. tract, P. B. Early Sur.
Spudded; no report.

Rual Swiger's No. 6 Gardner, 150 ft. S and E lines of tract.
T.D. 3,045 ft.; abnd.

Swiger et al's No. 4 Gardner, W offset to Vaughn producer.
Moving in material.

Dirks—Bee County

Dirks Bros.' No. 6 Harris, 150 ft. from NW line, 330 ft. from NE line of Lot 2, Harris Subd.
Sand 3,875-85 ft.; T.D. 2,885 ft.; comp.; 30 bbls. per hour.

Mills Bennett's No. 3-B Bassinger, 330 ft. N and E lines, SE NW Sec. 7.
Comp. 25 bbls., ¼-in. choke; T.P. 200 lbs.; C.P. 600 lbs.; sand 3,860-66 ft.; T.D. 3,866 ft.

Mills Bennett's No. 4-B Bassinger, 330 ft. from SE cor. Sec. 7.
Set csg. 4,866 ft.; W.O.C.

Mills Bennett Prod. Co.'s No. 1-C Harris, 330 ft. from SE and SW lines, J. L. Dugat Sur. No. A-1210.
S.D. 3,872 ft.; T.D. 3,885 ft.; comp.; 25 bbls. per hour.

Heyser, Heard & Walton's No. 7 Young, 660 ft. W of No. 2 Rawlins Sur.
Set csg. 109 ft.; W.O.C.

Heyser, Heard & Walton's No. 6 Young, 330 ft. from S line, 660 ft. due W of No. 5, C. A. Dugat Sur.
Comp. 17 bbls. per hour; T.D. 3,887 ft.; sand 3,842-87 ft.

Heyser, Heard & Walton's No. 4 Young, 330 ft. from NE line, 700 ft. NW of No. 3, F. P. Rawlins Sur.
T.D. 3,878 ft.; comp. 20 bbls. per hour.

Home Oil Co.'s No. 6 Bassinger, 660 ft. N of No. 5, Sec. 7.
Drlg. 2,560 ft.

Ray—Bee County

Dirks Bros.' No. 3 Ray, 660 ft. E of No. 2 and W road to Pettus in SW¼ of Sec. 7.
1,800 ft.; no report.

L. W. Littlejohn's No. 1 J. B. Borroum, 150 ft. out of SW cor. of 234-ac. tract, Wm. Gell Sur.
Standing 125 ft.

Simms Oil Co.'s No. 1-B Campbell, SE cor. Lot 12 Campbell Subd.
Drlg. 3,939 ft.

Simms Oil Co.'s No. 2 Ray, 660 ft. W No. 1 Ray.
Location.

Simms Oil Co.'s No. 3 Ray, 660 ft. S No. 1 Ray.
Drlg. 3,867 ft.

Sun Oil Co.'s No. 1 Rutledge, 330 ft. W line, 1,011 ft. S line, 120-ac. tract.
Spudded in.

Tide Water Oil Co.'s No. 1 Ray, 330 ft. N and E lines of 80-ac. tract, Blanchard Sur.
Sand 3,920-40 ft.; T.D. 3,945 ft.; comp.; no gauge.

Worth Oil Co.'s No. 3 Rutledge, 150 ft. out of SW cor., 300 ft. S of No. 2, 15-ac. tract, A. Hadley Sur.
Spudded in; S.D.

R. J. Worthington's No. 1 Chestnut, 330 ft. NW cor. 40-ac. tract, B. O. Hadley Sur.
Spudded in.

Tuleta—Bee County

Southwest Exploration Co.'s No. 1 Heyden & Bruckhan, C of farm tract, 330 ft. from N and W lines of Sec. 20, Uranga grant.
Rigging up.

Sun Oil Co.'s No. 1 Page, 330 ft. from SE and SW lines of 160-ac. tract, Nancy J. Young Sur. A-555.
Plug. drilled on Pettus sand; swabbing in

Texas Co.'s No. 5 Young, 660 ft. E No. 4 Young.
Location.

Texas Co.'s No. 3 Young, 330 ft. from S & E lines tract, Young Sur.
Comp.; no gauge; T.D. 3,915 ft.

Texas Co.'s No. 4 Young, 660 ft. E of No. 1, 330 ft. N of S line, George Young Sur.
Comp. 25 bbls. per hour; T.D. 3,915 ft.; sand 3,942-50 ft.

Pettus—Bee County

United Prod. Co.'s No. 51 Geo. A. Ray, 540 ft. from E line, 4,500 ft. to northern lease line, Geo. A. Kerr Sur.
T.D. 2,757 ft.; abnd.

Dobrowolski—Bexar County

D. C. Pegg and B. Miller's No. 3 Katie Strunk, 450 ft. from NE line and 1,450 ft. from SE line, Katie Strunk 139.65-ac. tract, Juan Montez Sur.
No report.

Von Ormy—Bexar County

Joe H. Parker's No. 1 James McClosky, 1,500 ft. N line, 475 ft. W line, F. A. Desaffre Sur. No. 134.
T.D. 800 ft.; dry and abandoned.

Richard Oil Co.'s No. 1 Karl Weilbacher.
Comp. 2 bbls.; T.D. 710 ft.; sand 685-95 ft.

A. J. Trawalter's No. 6 fee, 600 ft. E No. 5 fee, Florez Dessendier 202-ac. tract, Stephen Jette Sur. No. 53.
Comp. 6 bbls.; T.D. 660 ft.

Umburn & Trawalter's No. 5 Wm. Biel, 450 ft. SW line (river), 150 ft. NW line Wm. Biel 160-ac. tract, John S. Simpson Sur. No. 59.
Ready to spud.

Palo Blanco—Brooks County

United Prod. Co.'s No. 1 Kathleen Jones Hocker, 1,200 ft. SW of No. 2, 1,636 ft. from N line of Los Mogneijes de Palo Blanco Grant.
Coring 3,053 ft.

Bruner—Caldwell County

Dawn Oil Corp.'s No. 2 Floyd Tiller.
Derrick.

Branyon—Caldwell County

R. S. Boling's No. 2 C. F. Robertson, 575 ft. along Plum Creek from SW cor. of tract, 150 ft. from creek, John Neill Sur.
Coring 2,172 ft.; small show oil 2,165-2,710 ft.

Dale—Caldwell County

Adams & Lyles' No. 2 Moore, 300 ft. NE line, 150 ft. NW line, O. T. Moore 306.5-ac. tract, J. Gilbert Sur.
Comp. 15 bbls.; put on pump; T.D. 2,-290 ft.

Dunlap—Caldwell County

Exploration Co.'s (F. Meyers) No. 1 W. T. Mooney, 810 ft. from S line, 450 ft. from W line of 95-ac. tract, S. Seale Sur.
2,190 ft.; abnd.

Ballard & Witting et al's No. 1 Mrs. A. C. Bridges et al, 650 ft. from NW line, 450 ft. from NE line of Soloman Seale Sur.
Running 6⅛-in. csg.; T.D. 1,998 ft.

W. T. Walker's No. 3 Walker, 330 ft. SE of No. 2.
1,200 ft.; S.D.

Driscoll—Duval County

Continental Oil Co.'s No. 1-B Sevier Sur. No. 64, 660 ft. from S and E lines.
Drlg. 3,302 ft.

Government Wells Pool—Duval County

Buffalo Oil Co.'s No. 1 C. W. Hahl, 330 ft. out of SE cor. of SE¼ of NE¼ of Sec. 61, J. Poitevent Sur.
T.D. 2,328 ft.; abnd.

Frank Gravis' No. 1 DeWitt, 330 ft. S and W lines, NE¼ SE¼ Sur. 46.
Location.

Magnolia Pet. Co.'s No. 15 D.C.R.R., 1,650 ft. E line, 330 ft. N line, Sur. 59.
Comp. 8 bbls. per hour; T.D. 2,202 ft.

Magnolia Pet. Co.'s No. 5 Hahl, 330 ft. N line, 3,045 ft. E line, Sur. 67.
Set csg. 2,572 ft.; sand 2,672-79 ft.; comp. 18.5 bbls. per hour.

Magnolia Pet. Co.'s No. 49 D.C.R.C., 1,650 ft. N line, 990 ft. E line, Sur. 208.
Comp., T.D. 2,329 ft.; 100 bbls.

Magnolia Pet. Co.'s No. 3 D.C.R.C., Sur. 57.
Comp. 480 bbls. at 2,190 ft.

Magnolia Pet. Co.'s No. 2 Herbst, 330 ft. from N and W lines, Sur. 70.
Comp. 15 bbls. per hour; 3/16-in. choke.

Parr Oil Corp.'s No. 3 H. L. Glover, 330 ft. from N and E lines of SE¼ of SE¼ of Sec. 44, J. Poitevent Sur.
Location.

Smith & Storey's No. 16 Lundell, 990 ft. E line, 330 ft. N line, Sur. 48.
Drlg. 2,275 ft.

Loma Novia—Duval County

Birdwell Oil Co.'s No. 1 B.C.C., 330 ft. from N and E lines of the SW, SW, Sec. 76.
Sand 2,652-57 ft.; tested S.W.; coring deeper; T.D. 2,659 ft.

Buchanan & Blanco Oil Co.'s No. 1-B Ruiz, 185 ft. N line, 1,650 ft. E line, Sur. 73.
Location.

Duval Oil Co.'s No. 1 Hubbard, Morris & Cummings Sur., Sec. 77, 330 ft. out of NE cor. NE¼ section.
Rigging up.

Eastern Texas Pet. Co.'s No. 1 Hubbard, 330 ft. N and E line, NW¼ Sur. 71.
Rigging up.

Frank Gravis' No. 1 Flodin, 330 ft. from S and E lines of Sur. 61.
Testing 2,558 ft.

Frank Grovis' No. 2 Byland, 330 ft. S and E lines, Blk. 2, Sur. 78.
Location.
Claude Hamil's No. 2 Ruiz, 330 ft. from S and E lines of NW 160-ac. tract, Sur. 41.
Cemented csg.; W.O.C.
Henderson & Harvey's No. 1 Ruiz, 900 ft. from E line and 1,980 ft. from N line of Sur. 135.
Fishing for baller; T.D. 2,662 ft.
Highland Oil Co.'s No. 2 Hubbard, 330 ft. S and W lines, S½, N½ Sur. 284.
Set csg. 2,730 ft.; W.O.C.
Humble O. & R. Co.'s No. 3-C Welder, 2,928 ft. E line, 1,650 ft. S line, Sur. 73.
Drlg. shale 2,643 ft.
Lipscomb, Doubert et al's No. 1 Hubbard, 330 ft. from N and E lines of S½ of NE¼ of Sur. 75.
Sand 2,644-56 ft.; T.D. 2,656 ft.; comp.; 30 bbls. per hour, swabbing.
Rosen Oil Co.'s No. 3 Hubbard, 330 ft. from W line, 990 ft. from N line of SW¼ of Sur. 84.
Sand 2,765-75 ft.; comp.; no gauge.
Shell Pet. Corp.'s No. 3 Hubbard, 330 ft. E line, 990 ft. N line, SE¼ Sur. 77.
Swabbing.
Stieren Oil Co.'s No. 3 Wright, Sur. 73.
T.D. 2,714 ft.; I.P. 86 bbls. per day.
Texas Co.'s No. 7 Vela, 990 ft. E line, 330 ft. S line, Sur. 42.
Set surface csg. 101 ft.; W.O.C.
Texas Co.'s No. 8 Vela, 1,650 ft. E line, 330 ft. S line, Sur. 42.
Location.
Texas Co.'s No. 2 Wendt, 330 ft. W line, N line, Sur. 66.
Comp. 20 bbls. per hour; T.D. 2,663 ft.

Seven Sisters—Duval County

Atlantic Oil Co.'s No. 1 J. F. Welder, 330 ft. N and W lines, Sur. 335.
Rigging up.
Humble O. & R. Co.'s No. 1-B Serna, 330 ft. S and W lines of lease "B", B. S.&F. Sur.
Location.
Humble Oil & Refg. Co.'s No. 2-A Serna Jr. et al, 660 ft. W of No. 1-A, 330 ft. N of S line, 1,650 ft. E of W line of Sec. 384, B.S.&F. Sur.
Setting liner; T.D. 2,480 ft.
Mid-Continent Pet. Corp.'s No. 1 Serna Jr., 330 ft. N and W lines of S½ of N½ Sur. 384.
Location.
Santa Clara Oil Co.'s No. 9 Wood-Welder, 990 ft. N line, 330 ft. E line, 160-ac. tract, Sec. 385, J. Poitevent Sur.
Drlg. 1,512 ft.
Santa Clara Oil Co.'s No. 9 Wood-Welder, 990 ft. N line, 330 ft. E line of 160-ac. Tract, Sec. 385, J. Poitevent Sur.
Rig up.

North Pettus—Goliad

Diamond Half Oil Corp.'s No. 2 Mudd, 990 ft. NW and SW lines, 142.35-ac. tract No. 2, B.&B. Sur. No. 25.
Comp. 26 bbls. ¼-in. choke; T.P. 200 lbs.; C.P. 300 lbs.; T.D. 3,683 ft.

Pearsall—Frio County

Amerada Pet. Corp.'s No. 1 Kothman, 500 ft. from N and W lines of B. L. Crouch Sur.
Amerada Pet. Corp.'s No. 1 D. F. Smith et al, 4,500 ft. from NE line, 1,650 ft. from SE line, Joseph V. Mason Sur. No. 322.
Top Georgetown 6,077 ft.; T.D. 6,171 ft.; bailing.

Darst Creek—Guadalupe County

I. W. Burrows et al's No. 1 William Behring.
Abnd. location.
Texas Co.'s No. 2 Posey (workover).
Old T.D. 2,606 ft.; set 7-in. csg. at 2,575 ft.; T.D. of sidetracked hole 2,583 ft.

Dineco—Live Oak County

Smith & Storey's No. 1 Sparks, Jane Curry Sur.
Comp. 5,318 ft.; shut in; no gauge.
J. O. Whittington's No. 2 Henrietta C. Little, 2,640 ft. from SW line, 1,950 ft. from SE line, M. M. Shipp Sur.
Show oil 4,977 ft.; to core deeper and test.

Lacas—Live Oak County

Houston Oil Co.'s No. 32 Cartwright, 1,124 ft. N of No. 31, Trudo Sur.
P.B. 5,246 ft.; comp.; gas well not gauged.

McNeill—Live Oak County

Lion Oil Refg. Co.'s No. 8 McNeill, 230 ft. from NE line, 1,102 ft. from SE line of Blk. 9, Jane Curry Sur.
T.D. 4,281 ft.; I.P. 150 bbls. per day.

Three Rivers—Live Oak County

Benco Oil Corp.'s No. 1 E. Mahoney, 155 ft. from NW line of J. H. Harvey tract, 3,109 ft. SW of highway in Mark Killelly Sur.
S.D. 78 ft.
Turner & Walker's No. 1 C. F. Simmons, 50 ft. from N line, 300 ft. from W line, Farm Tract 513, Blk. 12, S. Hayes Sur.
T.D. 1,793 ft.; abnd.

Sam Fordyce—Hidalgo County

Cortez Oil Co.'s No. 2-C Smith, 230 ft. from N line, 990 ft. from W line of NE 40 acres of Tract B-3, Porcion 41.
Location.
Cortez Oil Co.'s No. 2-C Smith, 230 ft. from N line, 1,150 ft. from W line of NE 40 acres of Tract B-3, Porcion 41.
Location.
Cortez Oil Co.'s No. 1-C Smith, 230 ft. from N and W lines of NE 40 acres of Tract B-3, Porcion 41.
Perforated 2,750-62 ft.; comp.; no gauge; T.P. 675 lbs.; closed in.
Gem Oil Co.'s No. 2-B Seabury, 150 ft. N line, 537 ft. E line, 20-ac. tract, Por. 38, Drlg. 2,822 ft.
Harrison, Davis & Bishop's No. 4 Guerra, Tract 14, Porcion 41.
M.I.M.
Harrison & D. D. Oil Co.'s No. 3 Lula George, NW cor. of SW 20-ac. of tract 13, Porcion 41.
T.D. 2,767 ft.; drlg. plug.
Harrison, Davis & Bishop's No. 3 Guerra, 230 ft. from S line, 690 ft. from E line of 40-ac. tract, Tract 12, Porcion 41.
Cleaning out; flowing gas and wtr.
Henshaw et al's No. 1 Seabury, 219 ft. N line, 248 ft. E and W lines, Tract 255, Por. 35.
Spudding in.
Henshaw et al's No. 1 Smith, Tract 3-B, Porcion 41.
Comp. for allowable ¼-in. choke; T.D. 2,750 ft.
Kingwood Oil Co.'s No. 4 Guerra, 165 ft. S line, 1,150 ft. E line, Share 12, Por. 41, Location.
Kingwood Oil Co.'s No. 1 Seabury, 150 ft. NE cor. 10 acres, Tract 256, Por. 38.
Location.
Kingwood Oil Co.'s No. 6 Lawrence, 150 ft. N line, 550 ft. E line, Tract 274, Porcion 39.
Location.
Kingwood Oil Co.'s No. 6 Guerra, 150 ft. from S line, 640 ft. from W line, SW 20-ac. tract, 256 Porcion 39.
Sand 2,762-69 ft.; csg. 2,765 ft.; drlg. 2,773 ft.
Kingwood Oil Co.'s No. 4 J. Lawrence, 300 ft. from N line, 150 ft. from W line of W 40-ac. tract 274, Porcion 39.
No report.
Lacy's No. 2 Seabury, 230 ft. S line, 530 ft. W line, 6.25-ac. tract, Tract 256, Por. 38.
Moving in material.
Lacy's No. 1 Seabury, 230 ft. from S line, 530 ft. from W line of 6.25-ac. tract, Tract 256, Porcion 38.
Comp. for allowable, ¼-in. choke; T.D. 2,770 ft.
H. J. Porter's No. 2 C. E. Smith, N end of S½ of tract in Tract 278, Porcion 40.
Spudded; S.D.
E. Powell's No. 1 Lula George, SW cor. of NW 20-ac. Tract 13, Porcion 41.
Drlg. 1,107 ft.
Windsor Oil Co.'s No. 2 Doss, 630 ft. from N line, 150 ft. from W line of 55-ac. tract No. 278, Porcion 40.
S.D. 2,748-53 ft.; csg. 2,744 ft.; cleaned; T.D. 2,752 ft.; no pressure.

Mercedes—Hidalgo County

Union Sulphur Co.'s No. 5 American Rio Grande, L. & I. Co., 230 ft. N line, 350 ft. W line, Tract 2,082.
T.D. 1,224 ft.; cmtd. csg.; W.O.C.
Union Sulphur Co.'s No. 4 A.R.G.L.&I.C., 400 ft. N and W lines, Lot 1, Blk. 99, 1⅛ miles SW discovery well.
Drlg. 6,933 ft.
Union Sulphur Co.'s No. 1 American Rio Grande L. & I. Co., 400 ft. S and W of NE cor. of Lot 229, Blk. 59 (W.O.).
T.D. 6,972 ft.; drlg. plug.

Sandia—Jim Wells County

Magnolia Pet. Co.'s No. 6 Seeligson, 600 ft. W. 330 ft. S of No. 3 Canales Sur No. 90.
T.D. 7,135 ft.; fishing.

Weiner—Kendall County

Southwestern Dev. Co. Synd., Ltd.'s No. 1 W. G. Werner, 1,645 ft. from N line, 765 ft. from NW line of 320-ac. tract, J. F. Torrey Sur. No. 731.
675 ft., underreaming.

Kingsville—Kleberg County

Ray Clark's No. 1 House, Lot 5, Blk. 37, K.T.&I. Co. Sur.
S.D. 1,000 ft.
Fidelity Exploration's No. 1 Paul O. Henry, 150 ft. from N line midway E and W lines of Blk. 2, Sec. 49, K.T.&I. Sur.
2,600 ft., no report.
Fidelity Exploration Synd.'s No. 1 Vivian Kivlin, Sec. 4, Blk. 39, K.T.&I. Sur. on Vivian Kivlin lease.
Derrick blown down.

Jacob Pool—McMullen County

Loma Oil Co.'s No. 5-W Jacob, 2,207 ft. from E line, 13 ft. from N line of Jacob Sur. No. 10.
T.D. 1,750 ft.; abnd.
M. E. Young's No. 8-A Cox, E of Frio River across line from Lark tract in M. Hely Sur. (old well).
Sand 1,070 ft.; no report.

Loma Alta—McMullen County

Loma Oil Co.'s No. 1 Hagist, NE cor. of NW¼ of Sur. 108.
Sand 2,190-92 ft.; 2,215 ft., no report.

Taylor—Medina County

Callahan & Robert's No. 1 Ray Taylor, 1,450 ft. NS line, 220 ft. EW line, Sur. No. 135.
Spudded in; S.D.

Plymouth-San Patricio County

Benson & Jones' No. 1 Welder, 2,333 ft. from S line, 466 ft. from E line of Sec. 34.
Coring 5,987 ft.
Heep Oil Co.'s No. 2-E Welder, Sec. 16. Comp. 15 bbls. per hour, 5/32-in. choke; T.D. 5,646 ft.
Heep Oil Corp.'s No. 4-E Welder, 466 ft. from N line, 1,399 ft. from E line of N 400-ac. tract, Sec. 46, R. Montgomery Sur.
Rigging up.
Heep Oil Corp.'s No. 2-E Welder, 466 ft. from E line, 1,399 ft. from N line, 933 ft. due S of No. 1-E, N 400-ac. of Sec. 46, R. Montgomery Sur.
Comp. 256 bbls. in 6 hrs.; sand 5,581-5,667 ft.; perforated 5,642-49 ft.; T.P. 940 lbs.; C.P. 370 lbs.
Heep Oil Co.'s No. 5-E Welder, Sec. 46. Rigged up.
Heep Oil Corp.'s No. 7-E Welder, 466 ft. E line, 2,032 ft. S line, Montgomery Sur., Sec. 46.
Drlg. 3,053 ft.
Heep Oil Corp.'s No. 1-F Welder, 466 ft. N and E lines of 200-ac. tract, Sec. 46.
Drlg. 4,112 ft.
Plymouth Oil Co.'s No. 11-C Welder, 933 ft. N, 167 ft. W, No. 5-C Welder.
Set surface csg.; W.O.C.
Plymouth Oil Co.'s No. 12-C Welder, 933 ft. S line, 1,400 ft. W line, Sec. 49.
Drlg. 473 ft.
Plymouth Oil Co.'s No. 13-C Welder, 933 ft. N, 933 ft. W No. 3-C Welder.
Rigging up.
Plymouth Oil Co.'s No. 10-C Welder, 1,500 ft. from W line, 266 ft. from N line, Sec. 48.
Fishing 3,025 ft.
Plymouth Oil Co.'s No. 8-C Welder, 933 ft. E of No. 5-C and 933 ft. N of No. 4-C.
T.D. 5,625 ft.; comp. 150 bbls. through ⅛-in. choke; T.P. 275 lbs.; C.P. 650 lbs.
Plymouth Oil Co.'s No. 7-C Welder, 933 ft. W of No. 5-C.
5,638 ft.; comp.; no gauge.
Plymouth Oil Co.'s No. 9-C Welder, 1,056 ft. N, 466 ft. E of No. 4-C.
Set csg. 5,624 ft.; W.O.C.
Comp. at 5,893 ft.; gas well; no gauge.
Sun Oil Co.'s No. 1 Stone, offset to Magnolia No. 1 Corpus Christi Bank.
Location.

Los Olmos—Starr County

H. C. Horter, Trustee, No. 1 Sanchez, 150 ft. from N and W lines Blk 2, Share 74, Porcion 72.
Sand 501-05 ft.; recemented bottom.
H. C. Horton's No. 2 Sanchez, 150 ft. NW cor. Blk. 3, Share 72, Porcion 72.
Tested oil and S.W. 501-05 ft.; to drill deeper.
Ed Linberg's No. 7 Bass, 1,500 ft. from W line, 1,675 ft. from N line of Share 6, Porcion 75.
S.D. 500 ft.

Placetas—Starr County

Hughston Oil Co.'s No. 1-A Gregg-Wood, S end of Por. 34; replacement well, 990 ft. S of State Highway No. 4.
3,370 ft.; S.D.

Rio Grande—Starr County

Hiram Reed's No. 5 D.&C., 475 ft. from E line, 185 ft. from N line of Blk. 6, Tract 21, Porcion 80.
M.I.M.
W. W. Zimmerman's No. 2 D.&C. 1,122 ft. W. 150 ft. from S line of Blk. 1, Tract A-77, Porcion 81.
Drlg. 722 ft.

Saxet—Nueces County

Houston Oil Co.'s No. 4 Morgan, 660 ft. E of No. 3, Sec. 7, Range 5.
Comp. 90 bbls.; sand 4,869-74 ft.; csg. 4,868 ft.; T.D. 4,869 ft.
Houston Oil Co.'s No. 4 Walton, 330 ft. EW line, 1,560 ft. NS line.
Drlg. shale and lime 2,933 ft.; no report.
Magnolia Pet. Co.'s No. 1 Sanders, 1,650 ft. N No. 1 Baldwin.
Comp. 4,066 ft.; 25 bbls. per hour.
Magnolia Pet. Co.'s No. 2 Sanders, 330 ft. SW cor. 110-ac. tract, Sec. 165, B.S.&F. Sur.
Location.
Magnolia Pet. Co.'s No. 2 W. W. Walton, 330 ft. from E line, 289 ft. from S line of 92.11-ac. tract, Enrique Villareal Sur.
Location.
Smith et al's No. 1 Walton, NW cor. 92.11-ac. tract, Enrique Villareal Sur.
Reconditioning and testing.

Bruni—Webb County

Associated Oil Co.'s No. 7 Bruni, 330 ft. from NW line, 660 ft. NE of No. 5, Blk. 7, M. Arispe grant.
Location.
Highland Oil Co.'s No. 8 Bruni, 1,650 ft. from NW line, 330 ft. from NE line, Sur. 7.
Coring 3,407 ft.; had sand 3,387-94 ft.; no report.
Highland Oil Co.'s No. 12 A. M. Bruni Estate, 620 ft. E of No. 6, 330 ft. from S line of 200-ac. tract, M. Arispe grant.
Location.
O. W. Killam's No. 39 Bruni, C Blk. 50, Sur. 15.
Spudding in.

Laurel—Webb County

South Texas Oil Co.'s No. 1-A, Sec. 369, Blk. 2, C.C.S.D. & R.G.N.G. Sur.
Coring 2,032 ft.

West Cole Pool—Webb County

Ross Barnhart's No. 1 de la Garza, 1,500 ft. from N line, 200 ft. from E line of Sur. 262.
Standing 2,483 ft.
James P. Goslin's No. 2 Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 220.
Drlg. 1,370 ft.
Magnolia Pet. Co.'s No. 9 Seacord-Benavides, 330 ft. N and NW lines, Blk. 8, Sur. 174.
Location.
Magnolia Pet. Co.'s No. 11 B. Benavides, 530 ft. NE line, 30 ft. NW line, Blk. 487, Hale Sur., Arispe grant.
Set csg. 2,786 ft.; W.O.C.
Magnolia Pet. Co.'s No. 2-V Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 224, Arispe grant.
Testing 2,777 ft.
Magnolia Pet. Co.'s No. 4 Volpe-Benavides, 1,948 ft. from E line, 200 ft. from S line of Sur. 660.
Drlg. 2,995 ft.
R. E. Miesener's No. 1 Garza, 320 ft. E line, 200 ft. S line, NW¼ SE¼ Sur. 457.
Rigging up.
James P. Nash's No. 1 Benevides, 347 ft. from NW line, 313 ft. from SW line, Blk. 184, Arispe Grant.
Comp. 75 bbls. per hour; sand 2,778-86 ft.; csg. 2,778 ft.; T.D. 2,790 ft.
J. J. O'Hern's No. 1 Benavides, 347 ft. NW line, 313 ft. SW line, Blk. 220.
Rigging up.
Texas Co.'s No. 2 Benavides, 330 ft. NW and SW lines, Blk. 288.
Drlg. 1,657 ft.

Lopez—Webb County

Mills Bennett's No. 1 Lopez, 330 ft. NW cor. E½ SW¼ Sur. 724.
Drlg. 535 ft.
G. G. Mortimer's No. 1 Lopez, 1,333 ft.; S line, 2,310 ft. W line, Share 16, Sur. 73.
Comp. 40 bbls. per hour; sand 2,165-72 ft.

Noack—Williamson County

Coffield & Lanning's No. 3 Heap, 200 ft. from N line, 225 ft. from W line of tract in White Sur.
Location.
G. G. Mortimor's No. 1 Lopez, 1,333 ft. from S line, 2,310 ft. from W line, Share 16, Sur. 73.
Drlg. 800 ft.
R. R. Ogden's No. 1 Matteck, 150 ft. N and W lines of 108.5-ac. tract in White Sur.
Location.
W. L. Stephens' No. 1 J. P. Carlson, 200 ft. out of NW cor., 900 ft. SE line, 610 ft. SW line of Samuel C. Jones Sur.
T.D. 1,005 ft.; abnd.

Byersville—Williamson County

Taylor Ref. Co.'s No. 10-A Hemp, 150 ft. W line, 750 ft. N line, "A" lease.
Rig up.
Taylor Ref. Co.'s No. 2-B Walter Hemp, 450 ft. N line, 750 ft. W line, Hemp lease.
Drlg. 1,065 ft.; Serpentine.
Taylor Ref. Co.'s No. 3-B Walter Hemp, 750 ft. N and W lines of lease "B."
Comp.; est. 100 bbls.; T.D. 874 ft.; Serpentine.
Taylor Ref. Co.'s No. 9-A Sladek, H. White Sur., 150 ft. from NE line, 1,200 ft. SE line (creek).
Comp.; est. pump. 5 bbls.; T.D. 869 ft.; Serpentine.

Charco Redondo—Zapata County

Schimmel et al's No. 1 Martinez, 330 ft. from SE line and 847 ft. from NE line, Blk. 125, Share 1, Grullo Grant.
Drlg. 2,093 ft.

Escobas—Zapata County

G. E. Glasco's No. 1 Haynes, 200 ft. NW and SW lines Blk. 7, Haynes Subd., Comitas & Villa Grants.
Drlg. 103 ft.
Reliance Oil Co.'s No. 4 Haynes, 150 ft. SE line, 700 ft. SW line, Blk. 7, Comitas & Villa grants.
Testing 847 ft.
Texas Co.'s No. 74 Whitehead, 20,272 ft. SW line, 9,495 ft. SE line, Cerrito Blanco grant.
Coring 1,127 ft.

Lopena—Zapata County

Humble Oil & Refg. Co.'s No. 1 Dominguez, 12,785 ft. from NE line, 1,320 ft. from SE line of Porcion 31.
Drlg. 3,035 ft.; sand and shale.
Trowel et al's No. 1 W. Z. Guerra.
Coring brittle shale 1,790 ft.; no report.

Mirando Valley—Zapata County

C. L. Smith's No. 1 Robert Hinnant, 330 ft. out of NW cor. Sec. 307, Blk. 27, F. M. Makeig Sur.
P.B.; perforated 1,433-39 ft.; comp.; 5,000,000 ft. gas.

Oil Rail Freight

One dollar of every $10 received by American railroads from revenue car load freight in 1934 came from hauling petroleum products. Total income of Class 1 railroads from freight on car load lots of petroleum products amounted to $243,156,205, according to data obtained by the American Petroleum Institute from Interstate Commerce Commission reports. Tonnage in 1934 showed a 6.1 per cent increase over that of 1933, and there was also a gain of 2.5 per cent in revenue from petroleum products transported. The total tonnage of 55,776,394 tons does not include less than car load freight.

Minnesota Jobbers Date

The annual convention of the Minnesota Division of the Northwest Petroleum Association will be held at the Ryan Hotel, St. Paul, Minn., January 16 and 17, 1936.

Summary of Operations in All Fields for July

SUMMARY OF ALL FIELDS

Wells Completed

	Comp.	Prod.	Dry	Gas
Pennsylvania Grade	285	972	21	25
Lima	9	234	2	4
Central Ohio	9	0	1	8
Indiana	17	105	7	5
Kentucky	17	620	3	1
Michigan	38	14,583	7	13
Kansas	91	31,726	26	4
Oklahoma	184	82,589	60	14
North Central Texas	241	9,307	105	3
West Texas	56	22,390	11	0
Texas Panhandle	52	22,963	5	4
East Central Texas	22	572	12	4
East Texas	398	20,243	14	1
Gulf Coast Texas	92	23,541	21	5
Southwest Texas	155	21,605	62	9
North Louisiana	30	265	10	11
Gulf Coast Louisiana	25	10,921	8	0
Arkansas	5	20	4	0
Montana	19	797	2	1
New Mexico	21	43,949	6	0
Wyoming	6	86	3	0
Total July	1,773	307,488	391	112
Total June	1,821	307,975	407	103
Difference	48	487	16	9

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Pennsylvania Grade	80	235	315
Lima	2	32	34
Central Ohio	11	61	72
Indiana	0	42	42
Illinois	0	10	10
Kentucky	4	17	21
Michigan	100	160	260
Kansas	35	222	257
Oklahoma	78	510	588
North Central Texas	52	214	266
West Texas	59	215	274
Texas Panhandle	30	173	203
East Central Texas	13	57	70
East Texas	110	192	302
East Texas gas field	11	13	24
Gulf Coast Texas	21	137	158
Southwest Texas	16	155	171
North Louisiana	54	75	129
Gulf Coast Louisiana	15	75	90
Arkansas	10	29	39
Alabama	0	3	3
Florida	1	0	1
Mississippi	2	12	14
Montana	11	61	72
Wyoming	11	71	82
Colorado	4	24	28
New Mexico	25	96	121
Utah	0	10	10
Total July	755	2,901	3,656
Total June	820	2,849	3,669
Difference	65	52	13

OKLAHOMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Pontotoc	26	20,516	4	1
Osage	19	1,899	3	0
Logan	3	0	3	0
Noble	7	2,926	0	0
Lincoln	2	150	1	0
Seminole	17	13,859	3	0
Pottawatomie	5	1,370	3	0
Oklahoma	13	37,613	0	4
Canadian	1	0	1	0
Pawnee	1	0	1	0
Cleveland	1	0	0	1
Kay	1	0	1	0
Hughes	3	500	2	0
Beckham	1	0	0	1
Creek	15	558	6	1
Okmulgee	7	26	4	1
McIntosh	1	0	0	1
Tulsa	4	0	2	2
Wagoner	2	40	1	0
Greer	2	0	2	0
Okfuskee	5	2,475	2	1
Stephens	14	119	8	1
Carter	7	367	2	0
Jefferson	1	0	1	0
Marshall	5	11	3	0
Jackson	4	0	4	0
Comanche	4	70	3	0
Grady	1	25	0	0
Cotton	1	25	0	0
Caddo	1	40	0	0
Total July	184	82,589	60	14
Total June	165	58,316	42	8
Difference	19	24,273	18	6

Note: Fitts Pool, Pontotoc County, initial production of 20,516 bbls. from 21 new wells represents an average of four hours flow per well through casing or both tubing and casing.

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Alfalfa	0	1	1
Atoka	1	11	12
Beckham	2	2	4
Blaine	0	1	1
Bryan	1	1	2
Caddo	0	6	6
Cleveland	0	3	3
Cotton	0	2	2
Creek	6	45	51
Carter	2	14	16
Coal	0	3	3
Comanche	0	4	4
Choctaw	1	2	3
Ellis	0	1	1
Grant	0	3	3
Garfield	0	2	2
Garvin	0	4	4
Grady	0	4	4
Greer	0	4	4
Harmon	2	0	2
Hughes	1	12	13
Jackson	0	15	15
Jefferson	1	3	4
Johnston	0	3	3
Kay	0	3	3
Kiowa	0	3	3
Leflore	0	1	1
Love	1	0	1
Logan	3	17	20
Lincoln	0	9	9
Marshall	2	7	9
Murray	1	1	2
McClain	0	1	1
Major	0	1	1
Muskogee	0	6	6
Noble	2	17	19
Oklahoma	8	40	48
Osage	12	61	73
Okmulgee	0	23	23
Okfuskee	1	11	12
Pawnee	0	2	2
Payne	1	3	4
Pontotoc	12	62	74
Pittsburgh	1	1	2
Pottawatomie	6	11	17
Pushmataha	0	1	1
Seminole	9	45	54
Stephens	1	16	17
Tillman	0	3	3
Tulsa	0	8	8
Wagoner	1	9	10
Washita	0	2	2
Total July	78	510	588
Total June	75	482	557
Difference	3	28	31

KANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Barton	5	1,511	3	0
Butler	7	110	3	0
Chase	1	0	1	0
Chautauqua	1	0	1	0
Cowley	2	245	0	0
Ellsworth	10	9,259	1	0
Ellis	1	0	1	0
Greenwood	3	85	1	0
Harvey	4	81	3	0
McPherson	6	474	2	2
Pratt	1	90	0	0
Reno	9	4,873	1	1
Rice	10	6,263	0	0
Rooks	1	50	0	0
Rush	3	0	2	1
Russell	13	4,517	3	0
Scott	1	0	1	0
Sedgwick	5	789	1	0
Sumner	4	1,793	1	0
Stafford	3	1,486	1	0
Woodson	1	100	0	0
Total July	91	31,726	26	4
Total June	82	33,460	19	4
Difference	9	1,734	7	0

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Barton	0	9	9
Butler	2	17	19
Clay	0	1	1
Cowley	1	7	8
Dickinson	0	1	1
Elk	0	1	1
Ellis	2	3	5
Ellsworth	4	15	19
Graham	1	1	2
Greenwood	0	4	4
Harper	0	1	1
Harvey	1	23	24
Kingman	0	2	2
McPherson	2	20	22
Osage	0	1	1
Pratt	0	2	2
Reno	0	7	7
Rice	7	43	50
Rooks	3	2	5
Rush	2	5	7
Russell	7	37	44
Scott	0	1	1
Sedgwick	1	7	8
Stafford	1	0	1
Sumner	0	8	8
Trego	1	3	4
Woodson	0	1	1
Total July	35	222	257
Total June	40	221	261
Difference	5	1	4

EAST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas
Anderson	9	532	0	4
Cherokee	2	220	1	0
Franklin	1	0	1	0
Gregg	168	9,971	3	0
Henderson	2	0	2	0
Hunt	1	0	1	0
Kaufman	1	0	1	0
Limestone	1	0	1	0
McLennan	2	0	2	0
Nacogdoches	1	0	1	0
Navarro	1	0	1	0
Rusk	158	6,917	5	1
Smith	40	1,714	3	0
Upshur	30	1,421	2	0
Van Zandt	2	40	1	0
Wood	1	0	1	0
Total July	420	20,815	26	5
Total June	460	24,420	25	1
Difference	40	3,605	1	4

Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Anderson	1	1	13	15
Angelina	1	3	2	6
Bowie	0	1	0	1
Cherokee	0	2	3	5
Fannin	0	2	1	3
Freestone	1	1	0	2
Gregg	57	2	64	123
Harrison	0	1	3	4
Henderson	2	0	2	4
Hunt	0	0	2	2
Kaufman	0	2	0	2
Leon	1	1	0	2
Limestone	0	2	2	4
Morris	0	0	3	3
Nacogdoches	0	0	1	1
Navarro	0	1	1	2
Rains	2	0	0	2
Red River	2	0	1	3
Rusk	25	11	71	107
Smith	13	1	14	28
Titus	1	0	0	1
Upshur	15	0	24	39
Van Zandt	1	0	9	10
Wood	1	0	2	3
Total July	123	31	218	372
Total June	169	28	255	452
Difference	46	3	37	80

TEXAS PANHANDLE

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas
Carson	6	1,372	0	2
Collingsworth	1	0	0	1
Dallam	1	0	1	0
Gray	23	8,309	3	0
Hutchinson	8	2,052	0	0
Moore	4	546	0	1
Wheeler	10	10,684	1	0
Total July	53	22,963	5	4
Total June	42	15,950	2	1
Difference	11	7,013	2	3

Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	1	0	10	11
Childress	1	0	2	3
Collingsworth	0	1	0	1
Dallam	0	1	0	1
Gray	7	12	64	83
Hall	1	1	0	1
Hartley	0	0	1	1
Hutchinson	9	3	40	52
Moore	0	3	4	7
Ochiltree	1	0	0	1
Randall	0	0	1	1
Roberts	0	0	2	2
Wheeler	11	15	13	39
Total July	30	36	137	203
Total June	47	40	121	209
Difference	17	4	16	6

WEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas
Andrews	2	1,382	1	0
Crockett	1	93	0	0
Ector	5	2,490	1	0
Fisher	4	686	1	0
Garza	1	25	0	0
Glasscock	1	94	0	0
Howard	6	2,938	0	0
Jones	1	422	0	0
Loving	1	365	0	0
Lynn	1	0	1	0
Pecos	6	1,074	2	0
Reagan	1	59	0	0
Runnels	1	0	1	0
Scurry	1	0	1	0
Stonewall	1	0	1	0
Upton	8	3,032	0	0
Ward	11	8,128	2	0
Winkler	4	1,602	0	0
Total July	56	22,390	11	0
Total June	60	22,107	10	1
Difference	4	283	1	1

Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Andrews	1	0	10	11
Borden	1	0	0	1
Brewster	0	3	2	5
Cochran	1	0	1	2
Coke	0	0	1	1
Concho	1	0	0	1
Crane	0	1	7	8
Crockett	1	0	3	4
Culberson	0	1	1	2
Dawson	0	2	0	2
Ector	3	1	19	23
El Paso	0	2	1	3
Fisher	5	0	6	11
Glasscock	2	0	4	6
Howard	5	0	22	27
Jeff Davis	1	0	1	2
Jones	1	0	9	10
Kimble	0	0	1	1
Loving	0	1	1	2
Lynn	0	0	1	1
Martin	0	1	0	1
Mitchell	0	0	3	3
McCulloch	0	1	0	1
Pecos	3	3	9	15
Presidio	0	1	0	1
Reagan	0	1	1	2
Reeves	1	1	3	5
Runnels	0	2	1	3
Schleicher	0	0	2	2
Scurry	1	0	1	2
Sutton	1	0	0	1
Taylor	1	1	2	4
Tom Green	0	1	0	1
Upton	6	0	13	19
Ward	18	6	29	53
Winkler	6	2	29	37
Yoakum	0	0	1	1
Total July	59	21	184	274
Total June	63	58	144	269
Difference	4	27	40	5

WEST CENTRAL AND NORTH TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas
Archer	73	3,523	28	0
Baylor	9	1,725	2	0
Brown	2	0	2	0
Callahan	4	129	1	0
Clay	5	2	4	0
Coleman	2	126	1	0
Cooke	22	729	9	1
Eastland	5	100	2	0
Hardeman	1	0	1	0
Jack	11	80	6	0
King	1	0	1	0
Montague	15	508	7	0
Shackelford	18	418	9	0
Wichita	31	333	14	0
Wilbarger	12	505	3	1
Young	30	1,129	15	1
Total July	241	9,307	105	3
Total June	228	8,163	113	5
Difference	13	1,144	8	2

Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Archer	12	2	36	50
Baylor	2	0	7	9
Brown	2	2	7	11
Callahan	2	4	2	8
Clay	0	0	1	1
Coleman	1	5	4	10
Collin	0	1	0	1
Comanche	0	2	1	3
Cooke	4	1	15	20
Denton	1	1	0	2
Eastland	1	5	3	9
Erath	0	2	0	2
Foard	0	0	2	2
Grayson	0	3	0	3
Hamilton	0	1	0	1
Hardeman	0	2	1	3
Haskell	1	1	0	2
Jack	4	1	6	11
Mills	0	0	1	1
Montague	2	1	5	8
Palo Pinto	0	1	1	2
Parker	0	3	0	3
Shackelford	5	4	15	24
Stephens	1	2	0	3
Tarrant	0	0	1	1
Throckmorton	0	0	2	2
Wichita	6	2	14	22
Wilbarger	2	2	12	16
Wise	0	0	1	1
Young	6	3	27	36
Total July	52	50	164	266
Total June	75	58	176	309
Difference	23	8	12	43

SOUTHWEST TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Gas	Rgs.	Drlg.	Ttl.
Angelita	1	0	1	0	0	0	0
Bateman	0	0	0	0	0	1	1
Blas Uribe	2	0	0	2	0	0	0
Branyon	0	0	0	0	0	1	1
Bruni-Cole	10	897	3	1	0	5	5
Callihan	0	0	0	0	0	1	1
Caesar	4	420	1	0	0	1	1
Carroll	0	0	0	0	0	1	1
Cedar Creek	1	200	0	0	0	0	0
Chapman	1	0	1	0	0	0	0
Charco Redondo	1	0	1	0	0	1	1
Dinero	0	0	0	0	0	1	1
Dirks	13	6,870	0	0	2	3	5
Darst Creek	0	0	0	0	0	1	1
Dobrowolski	1	3	0	0	1	0	1
Driscoll	0	0	0	0	0	1	1
Dunlap	0	0	0	0	0	5	5
Escobas	5	160	1	0	1	0	1
Floresville	1	2	0	0	0	0	0
Govt. Wells	15	1,532	1	2	1	5	6
Hondo	0	0	0	0	0	1	1
Jacob	3	50	1	0	0	2	2
Jennings	1	0	1	0	0	0	0
Kingsville	0	0	0	0	1	2	3
Laurel	1	0	1	0	0	0	0
Loma Alto	3	168	2	0	0	0	0
Loma Novio	13	4,396	0	1	0	8	8
Lopez	1	42	0	0	0	1	1
Lopena	4	0	2	2	0	1	1
Los Olmos	1	0	1	0	0	1	1
Lucas	0	0	0	0	0	1	1
McNeill	1	150	0	0	0	0	0
Mercedes	1	0	1	0	0	2	2
Mirando City	0	0	0	0	0	1	1
Moca	2	0	2	0	0	0	0
Mt. Lucas	1	0	1	0	0	0	0
Noack	0	0	0	0	0	1	1
No. Pettus	1	600	0	0	0	0	0
Pearsall	0	0	0	0	0	2	2
Palo Blanco	0	0	0	0	0	1	1
Pettus	1	0	1	0	0	1	1
Placetas	0	0	0	0	0	1	1
Plymouth	5	1,008	2	0	1	6	7
Ray	2	360	0	0	1	3	4
Rio Grande City	4	175	2	0	1	0	1

Sam Fordyce	5	678	1	0	1	8	9
Sandia	0	0	0	0	0	1	1
Sarnosa	2	155	0	0	0	0	0
Saxet	2	500	1	0	0	2	2
Seeligson	0	0	0	0	0	1	1
Seven Sisters	4	1,632	1	0	0	2	2
Sinton	0	0	0	0	0	1	1
Three Rivers	1	0	1	0	0	1	1
Von Ormy	0	0	0	0	0	2	2
Werner	0	0	0	0	0	1	1
W. Tuleta	6	1,583	1	0	1	1	2
Worth	1	0	1	0	0	0	0
Zoborosky	2	10	0	0	0	0	0
Misc.	32	0	31	1	5	73	78
Ttl. July	155	21,605	63	9	16	155	171
Ttl. June	127	16,356	51	7	20	128	148
Difference	28	5,249	12	2	4	27	23

GULF COAST

Texas

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Allen Dome	1	0	1	0	0	0	0
Anahuac	3	2,232	0	0	0	1	1
Arriola	1	0	0	1	0	2	3
Barbers Hill	3	1,029	0	0	1	4	5
Batson	1	0	1	0	0	2	2
Big Hill	0	0	0	0	0	1	1
Big Creek	0	0	0	0	0	1	1
Blue Ridge	1	400	0	0	0	1	1
Boling	0	0	0	0	0	1	1
Clay Creek	1	215	0	0	1	1	2
Cleveland	0	0	0	0	0	1	1
Colette Cr'k.	1	142	0	0	0	0	0
Conroe	5	2,448	1	0	1	3	4
Danbury	0	0	0	0	0	1	1
Dickinson	4	1,259	0	1	0	5	5
Esperson	1	0	1	0	0	3	3
Fannett	0	0	0	0	0	1	1
Hankamer	2	1,005	0	0	3	3	6
Hardin	1	600	0	0	0	0	0
Hastings	6	1,693	0	0	0	11	11
High Island	2	505	0	0	2	7	9
Hull	0	25	0	0	0	0	0
Humble	3	77	2	0	0	3	3
Livingston	5	1,387	0	0	1	4	5
Lost Lake	1	60	0	0	0	0	0
Louise	2	45	1	0	0	3	3
McFaddin	0	0	0	0	0	1	1
Manvel	5	879	0	2	1	11	12
Markham	1	0	1	0	0	1	1
Mykawa	5	1,248	3	0	1	5	6
Orchard	0	0	0	0	0	2	2
Pickett Rdg.	1	284	0	0	0	1	1
Pierce Jct.	0	0	0	0	0	6	6
Placedo	4	371	1	0	0	5	5
Pt. Neches	0	0	0	0	0	2	2
Pt. Lavaca	3	176	2	0	1	1	2
Rac'n Bend	4	1,387	0	0	0	2	2
Refugio	1	252	0	0	0	1	1
San Felipe	1	0	1	0	0	0	0
S. Houston	1	264	0	0	0	1	1
Thompson	2	492	0	0	0	3	3
Tomball	12	4,705	0	1	0	6	6
Vanderbilt	0	0	0	0	0	1	1
Van Vleck	0	0	0	0	0	1	1
Misc.	7	260	6	0	6	26	32
Ttl. July	92	23,541	21	5	21	137	158
Ttl. June	93	27,937	32	2	35	133	168
Difference	1	4,396	11	3	14	4	10

Louisiana

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Bay St. Elaine	0	0	0	0	0	1	1
Bayou St. Dennis	0	0	0	0	0	2	2
Bik. Bayou	1	446	0	0	1	2	3
Bosco	5	1,572	1	0	0	6	6
Caillou Isl.	2	2,096	0	0	0	1	1
Cameron Meadows	0	0	0	0	0	2	2
Choctaw	0	0	0	0	0	1	1
Darrow	0	0	0	0	1	1	2
Dog Lake	0	0	0	0	0	1	1
Four Isle	0	0	0	0	1	0	1
Garden Isl.	0	0	0	0	1	1	2
Gillis	5	1,320	3	0	2	8	10
Gueydan	0	0	0	0	0	1	1
Hackberry	1	176	0	0	2	3	5
Iowa	2	1,274	0	0	0	1	1
Jennings	1	130	0	0	0	1	1
Lake Barre	3	1,155	2	0	0	1	1
Lake Hermitage	0	0	0	0	0	1	1
Leesville	2	2,526	0	0	0	4	6
New Iberia	0	0	0	0	0	2	2
Pt. Barre	0	0	0	0	0	1	1
Roanoke	1	226	0	0	1	6	7
Sulphur	0	0	0	0	0	3	3
Sweet Lake	0	0	0	0	1	0	1
White Castle	0	0	0	0	0	2	2
Misc.	2	0	2	0	0	23	25
Ttl. July	25	10,921	8	0	15	75	90
Ttl. June	38	14,215	14	1	17	64	81
Difference	13	3,294	6	1	2	11	9

LOUISIANA-ARKANSAS

North Louisiana

Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Gas*	Rgs.	Dlg.	Ttl.
Avoyelles	0	0	0	0	1	1	2
Bienville	0	0	0	0	1	0	1
Bossier	2	0	1	1	1	11	12
Caddo	9	175	2	1	24	25	49
Caldwell	1	0	1	0	2	2	4
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	1	1
DeSoto	4	20	1	2	1	6	7
East Carroll	0	0	0	0	0	1	1
Grant	0	0	0	0	1	0	1
Jackson	0	0	0	0	0	1	1
LaSalle	0	0	0	0	1	1	2
Lincoln	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Morehouse	2	0	0	2	0	2	2
Natchitoches	0	0	0	0	1	3	4
Ouachita	3	0	0	3	8	2	10
Red River	1	0	1	0	1	1	2
Sabine	3	70	1	0	8	12	20
Tensas	1	0	1	0	0	0	0
Union	4	0	2	2	1	3	4
Webster	0	0	0	0	2	0	2
Winn	0	0	0	0	1	0	1
Ttl. July	30	265	10	11	54	75	129
Ttl. June	19	470	8	7	32	67	99
Difference	11	205	2	4	22	8	30

*Gas production: Bossier, 40,180,000 ft.; Caddo, 250,000 ft.; DeSoto, 17,600,000 ft.; Morehouse, 14,000,000 ft.; Ouachita, 5,000,000 ft.; Union, 4,250,000 ft.; total, 81,280,000 ft.

East Texas (Border Counties)

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Cass	0	0	0	0	5	0	5
Harrison	0	0	0	0	2	3	5
Marion	0	0	0	0	1	2	3
Panola	0	0	0	0	2	6	8
Shelby	0	0	0	0	1	2	3
Ttl. July	0	0	0	0	11	13	24
Ttl. June	1	0	1	0	3	13	16
Difference	1	0	1	0	8	0	8

Arkansas

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Arkansas	0	0	0	0	0	1	1
Ashley	0	0	0	0	0	2	2
Calhoun	0	0	0	0	0	1	1
Columbia	0	0	0	0	0	2	2
Hempstead	0	0	0	0	1	1	2
Lafayette	0	0	0	0	4	1	5
Miller	1	0	1	0	3	7	10
Nevada	0	0	0	0	0	1	1
Ouachita	3	0	3	0	0	3	3
Poinset	0	0	0	0	0	1	1
St. Francis	0	0	0	0	0	1	1
Union	1	20	0	0	2	8	10
Ttl. July	5	20	4	0	10	29	39
Ttl. June	11	16	10	0	9	27	36
Difference	6	4	6	0	1	2	3

Alabama

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Covington	0	0	0	0	0	1	1
Houston	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	1	1
Ttl. July	0	0	0	0	0	3	3
Ttl. June	0	0	0	0	1	3	4
Difference	0	0	0	0	1	0	1

Florida

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Walton	0	0	0	0	1	0	1

Mississippi

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Amite	0	0	0	0	0	1	1
Bolliver	0	0	0	0	0	1	1
Clarke	0	0	0	0	1	0	1
Grenada	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Lauderdale	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	2	2
Rankin	0	0	0	0	0	1	1
Simpson	0	0	0	0	1	1	2
Warren	0	0	0	0	0	1	1
Washington	0	0	0	0	0	1	1
Winston	0	0	0	0	0	1	1
Ttl. July	0	0	0	0	2	12	14
Ttl. June	2	0	1	1	2	13	16
Difference	2	0	1	1	0	1	1

ROCKY MOUNTAIN AREA

New Mexico

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Chaves	0	0	0	0	0	4	4
Eddy	0	0	0	0	2	12	14
Lea	18	43,929	4	0	18	48	66
McKinley	1	20	0	0	3	0	3
Otero	1	0	1	0	0	0	0
Quay	0	0	0	0	0	2	2
Roosevelt	0	0	0	0	0	2	2
San Juan	1	0	1	0	1	11	12
San Miguel	0	0	0	0	0	4	4
Valencia	0	0	0	0	1	4	5
Misc.	0	0	0	0	0	9	9
Ttl. July	21	43,949	5	0	25	96	121
Ttl. June	28	59,603	4	0	16	97	113
Difference	7	15,654	2	0	9	1	8

Wyoming

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Albany	0	0	0	0	0	4	4
Big Horn	0	0	0	0	4	9	13
Carbon	0	0	0	0	1	6	7
Converse	0	0	0	0	1	6	7
Fremont	0	0	0	0	0	4	4
Hot Spgs.	0	0	0	0	1	4	5
Lincoln	0	0	0	0	0	3	3
Niobrara	0	0	0	0	2	8	10
Park	0	0	0	0	1	5	6
Sweetwater	1	0	1	0	0	1	1
Sublet	1	61	0	0	0	4	4
Uinta	0	0	0	0	0	6	6
Washakie	1	0	1	0	0	3	3
Weston	3	25	1	0	1	6	7
Misc.	0	0	0	0	0	2	2
Ttl. July	6	86	3	0	11	71	82
Ttl. June	8	12,997	2	1	16	69	85
Difference	2	12,911	1	1	5	2	3

Montana

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Big Horn	0	0	0	0	0	2	2
Carbon	0	0	0	0	0	4	4
Cascade	0	0	0	0	1	1	2
Fergus	0	0	0	0	0	3	3
Glacier	9	479	1	1	6	25	31
Pondera	0	0	0	0	1	2	3
Toole	10	318	1	0	3	16	19
Misc.	0	0	0	0	0	8	8
Ttl. July	19	797	2	1	11	61	72
Ttl. June	27	2,785	4	0	18	55	73
Difference	8	1,988	2	1	7	6	1

Utah

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Total July	0	0	0	0	0	10	10
Total June	2	0	2	0	0	10	10
Difference	2	0	2	0	0	0	0

Colorado

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Adams	0	0	0	0	1	1	2
Archuleta	0	0	0	0	0	2	2
Grand	0	0	0	0	0	2	2
Huerfano	0	0	0	0	0	2	2
Jackson	0	0	0	0	0	2	2
Larimer	0	0	0	0	0	2	2
Moffat	0	0	0	0	2	1	3
Misc.	0	0	0	0	1	11	12
Ttl. July	0	0	0	0	4	24	28
Ttl. June	3	1,488	2	0	5	25	30
Difference	3	1,488	2	0	1	1	2

EASTERN FIELDS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas
Bradford	142	135	0	0
Allegany	7	7	0	0
Venango-Clarion	37	128	1	0
Butler-Armstrong	8	19	1	0
S. W. Pennsylvania	9	45	3	2
Southeast Ohio	39	422	6	4
West Virginia	43	216	10	19
Total July	285	972	21	25
Total June	293	464	22	34
Difference	8	508	2	9

Rigs and Wells Drilling

District—	Rigs	Drlg.	Ttl.
Bradford	24	71	95
Allegany	1	6	7
Venango-Clarion	2	17	19
Butler-Armstrong	5	4	9
Southwest Pennsylvania	6	24	30
Southeast Ohio	15	39	54
West Virginia	27	74	101
Total July	80	235	315
Total June	78	265	343
Difference	2	30	28

CENTRAL WEST

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Lima	9	234	2	4	2	37	39
Central Ohio	9	0	1	3	11	61	72
Indiana	17	105	7	5	0	42	42
Illinois	0	0	0	0	0	10	10
Kentucky	17	620	3	1	4	17	21
Michigan	38	14,583	7	13	100	160	260
Ttl. July	90	15,542	20	31	117	327	444
Ttl. June	14	8,628	6	12	98	295	393
Difference	76	6,914	14	19	19	32	51

LIMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Wood	1	0	1	0	0	3	3
Henry	0	0	0	0	0	2	2
Lucas	0	0	0	0	0	1	1
Allen	1	30	0	0	0	1	1
Auglaize	0	0	0	0	1	4	5
Ottawa	1	200	0	0	0	1	1
Hardin	2	0	0	2	0	1	1
Darke	0	0	0	0	0	3	3
Van Wert	0	0	0	0	0	6	6
Hancock	0	0	0	0	0	1	1
Sandusky	1	0	1	0	0	2	2
Seneca	1	0	0	1	0	3	3
Wyandot	2	4	0	1	1	4	5
Ttl. July	9	234	2	4	2	32	34
Ttl. June	9	113	2	0	3	38	41
Difference	0	121	0	4	1	6	7

CENTRAL OHIO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Ashland	0	0	0	0	1	3	4
Wayne	0	0	0	0	0	3	3
Cuyahoga	0	0	0	0	1	1	2
Lorain	2	0	0	2	0	4	4
Richland	1	0	1	0	0	3	3
Holmes	0	0	0	0	2	4	6
Summitt	0	0	0	0	2	4	6
Coshocton	0	0	0	0	0	4	4
Tuscarawas	1	0	0	1	0	4	4
Trumbull	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Stark	3	0	0	0	3	1	12	13
Gallia	0	0	0	0	0	4	4
Scioto	0	0	0	0	0	1	1
Pike	1	0	0	0	1	0	1	1
Perry	0	0	0	0	0	3	6	9
Lawrence	0	0	0	0	0	1	3	4
Delaware	0	0	0	0	0	1	0	1
Fairfield	1	0	0	0	1	0	1	1
Ttl. July	9	0	1	8	11	61	72
Ttl. June	19	20	6	12	10	54	64
Difference	10	20	5	4	1	7	8

INDIANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Gibson	6	12	1	4	0	4	4
Pike	1	0	1	0	0	4	4
Knox	0	0	0	0	0	1	1
Decatur	0	0	0	0	0	3	3
Lawrence	0	0	0	0	0	2	2
Daviess	1	0	1	0	0	3	3
Cass	0	0	0	0	0	1	1
DeKalb	0	0	0	0	0	1	1
Jay	0	0	0	0	0	2	2
Martin	0	0	0	0	0	4	4
Perry	3	50	1	0	0	4	4
Spencer	2	33	1	0	0	5	5
Fountain	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Newton	0	0	0	0	0	1	1
Sullivan	0	0	0	0	0	1	1
Posey	1	0	1	0	0	1	1
Dearborn	0	0	0	0	0	1	1
Dubois	1	0	1	0	0	0	0
Washington	1	0	0	1	0	0	0
Warrick	1	10	0	0	0	0	0
Lagrange	0	0	0	0	0	1	1
Marion	0	0	0	0	0	1	1
Ttl. July	17	105	7	5	0	42	42
Ttl. June	14	103	7	4	0	45	45
Difference	3	2	0	1	0	3	3

KENTUCKY

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Ohio	15	370	3	1	2	12	14
Hancock	2	250	0	0	2	5	7
Ttl. July	17	620	3	1	4	17	21
Ttl. June	27	760	12	0	0	12	12
Difference	10	140	9	1	4	5	9

ILLINOIS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Clark	0	0	0	0	0	4	4
Crawford	0	0	0	0	0	4	4
Jasper	0	0	0	0	0	2	2
Ttl. July	0	0	0	0	0	10	10
Ttl. June	1	10	0	0	0	9	9
Difference	1	10	0	0	0	1	1

MICHIGAN

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Midland	8	3,750	1	0	18	42	60
Isabella	4	0	2	2	18	32	50
Ogemaw	1	75	0	0	21	12	33
Oceana	1	0	1	0	0	0	0
Gladwin	1	0	1	0	1	3	4
Eaton	0	0	0	0	0	1	1
Hillsdale	0	0	0	0	2	0	2
Lenawee	0	0	0	0	1	0	1
Lapeer	0	0	0	0	3	2	5
Bay	0	0	0	0	0	1	1
Roscommon	0	0	0	0	1	0	1
Mason	0	0	0	0	1	0	1
Clare	0	0	0	0	0	3	3
Chippewa	0	0	0	0	1	0	1
Clinton	0	0	0	0	1	1	2
Mecosta	7	0	0	7	5	13	18
Montcalm	12	10,708	0	4	24	39	63
Gratiot	1	0	1	0	1	9	10
Newaygo	0	0	0	0	2	0	2
Saginaw	2	50	0	0	0	0	0
Osceola	1	0	1	0	0	2	2
Ttl. July	38	14,583	7	13	100	160	260
Ttl. June	62	8,222	16	13	85	137	222
Difference	24	6,361	9	0	15	23	38

Fort Worth Gas Rate

FORT WORTH, Tex., Aug. 12.—The Lone Star Gas Co. has applied to the city council for permission to increase its domestic rates in Fort Worth an average of 19 per cent. The application was filed before the council on a proposed ordinance reducing the rates 20 per cent.

J. C. Sullivan Named

Julius C. Sullivan, general superintendent of the Gulf Refining Co.'s tank car department, Pittsburgh, Pa., has been appointed member of the American Petroleum Institute's subcommittee on railroad equipment.

E. C. TEXAS WILDCATS

Week Ending August 10

Camp Hill Area

Gulf Prod. Co.'s No. 2-A Southern Lbr. Co., 330 ft. W along N line of 115.9-ac. tract from SE cor. of L. B. Ross' 37.6-ac. tract, and 330 ft. S at R/A. south offset to No. 1 Ross.
Elev. 598 ft.; T.D. 5,236 ft.; T.S. 5,222 ft.; made 130 ft. oil and 25 ft. oily mud on D.S.T.; set csg.

Gulf Prod. Co.'s No. 3-A Southern Lbr. Co., 330 ft. N along W line of 115.9-ac. tract from SE cor. of D. A. Maddox 106-ac. tract, and 330 ft. E at R/A. east offset to No. 1 Maddox.
T.D. 5,095 ft.; made 3,600 ft. oil in 8 minutes on D.S.T.

Cayuga Area—Anderson County

Tide Water Oil Co. et al's No. 21-A Wells, 4,079 ft. N and 2,333 ft. W of lease, S. Edmondson Sur. (Trinity test).
T.D. 8,925 ft.; drilled plug; now washing.

Long Lake Area—Anderson County

Tide Water and Texas Seaboard Oil Co.'s No. 3 Goode, 2,500 ft. from most northerly N line and 2,200 ft. from most easterly E line of F. Smith Sur.
Location.

Tide Water and Texas Seaboard Oil Co.'s No. 1 H. B. Keeling, 1,408 ft. from S line and 126 ft. from E line, Simon Sanches Sur., one-half mile E of Tucker.
Derrick.

Angelina County

Howze Oil Co.'s No. 1-C Finley, 150 ft. out of NW cor. of 85-ac. tract, 7 miles NE of Lufkin, Bluford Mitchell Sur.
Spudded.

Hunter Co., Inc.'s No. 3 Long Bell Lbr. Co., 250 ft. from N and W lines in J. Fuicher Sur., 5 or 6 miles SE of Huntington.
Location.

Bowie County

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
S.D. 1,121 ft.

Woodley & Bentley's No. 1 Lumpkin, 330 ft. out of NE cor. of 345-ac. tract, J. McDermot Sur., 1 mile SW of Dalby Springs.
Rigged up.

Cherokee County

O'Connor and St. Germaine Oil Co.'s No. 1 Long, 150 ft. E and 450 ft. E. G. S. Long Sur., 2 miles S of Mount Selman.
Elev. 668 ft.; S.D. 4,956 ft.; to make drill stem test.

Shell Pet. Corp.'s No. 1 New Birmingham Dev. Co., 190 ft. S and 150 ft. E from SE cor. T. J. Wood 160-ac. lease Levi Jordan Sur.
Top sand 5,289 ft.; D.S. stuck 5,292 ft.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D. 1,553 ft.

Fannin County

B. F. Allen's No. 1-B Argo, center of 16½-ac. tract in J. G. Swisher Sur., 1 mile S of Ector.
S.D. 405 ft.

Warner Moore et al's No. 1 Hancock, 400 ft. from W and 150 ft. N lines, Sec. 16, L. M. Baldock Sur., ½ mile S of Trenton.
S.D. 652 ft.

Freestone County

W. W. Hinchcliffe et al's No. 1 T. Longbotham, 4,585 ft. from W and 1,525 ft. from N lines of R. B. Longbotham Sur.
Drlg. 50 ft.

Hoover et al's No. 1 McFall, 150 ft. S and W lines, S. Garrison Sur., E of Mexia.
Derrick.

J. E. Milburn's No. 1 S. E. McShan, 4,000 ft. NW and 5,000 ft. NE of tract, 3 miles SE of Donie, G. Diaz Sur.
S.D. 270 ft.

Gregg County

O. T. Clark's No. 1 Williams, 2,100 ft. from S and 2,400 ft. from W of D. Hill Sur., 3 miles NE of Longview.
S.D. 3,710 ft.

L. P. Kean's No. 1 S. M. Smith, 1,000 ft. E and 1,250 ft. S of W. W. Avery Sur., 4 miles SE of Gladewater.
S.D. 1,420 ft.

Henderson County

Kirby Pet. Co.'s No. 1 C. L. Litchfield, 600 ft. N and 350 ft. W. I. Clendennon Sur.
Location.

Taubert & McKee's No. 2 M.T. Todd, 2,750 ft. from NE and 3,970 ft. from SE lines of Sur., Geo. Aldrich Sur., 2 miles SE of Malokoff.
Elev. 359 ft.; base Austin 3,675 ft.; drlg. 4,075 ft.

J. K. Wells' No. 1 W. E. Warren, 330 ft. out of NE cor. of Thos. Hanna Sur., 4 miles W of LaRue.
Drlg. 2,082 ft.

H. M. Wilson's No. 1 fee, 970 varas S of NE cor. of 943-ac. tract, 5 miles N of Malahoff.
Derrick.

Hopkins County

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Bros. A. Caro Sur.
S.D. 2,950 ft.; C.O.

Hunt County

Long & Wolfe et al's No. 1 A. L. Chapman, 375 varas from N and 2,060 ft. from W line of Enos Murphy Sur, 6 miles W of Greenville.
Drlg. 1,276 ft.

J. F. Morrissey & Co., Inc.'s No. 1 Fry, 543 ft. from N and 200 ft. from E of 146-ac. tract, 7 miles N of Commerce, C. Davis Sur.

Kaufman County

Germany et al's No. 1 Clark, 951 ft. N and 1,000 ft. W of tract, S. Eden Sur.
T.D. 1,780 ft.

Murry & Emerson's No. 1 G. W. Martin, 1,660 ft. from W and 250 ft. from N of 140-ac. tract, from W. L. C. Butler Sur., 2 miles NE of Kemp.
S.D. 1,784 ft.

Lamar County

Gulf Petroleum Co.'s No. 1 A. L. Darnell, 1,490 varas from S and 1,050 varas from W line of H. L. Williams Sur., 4 miles NE of Paris.
Top Woodbine 948 ft.; Austin 816-24 ft.; drlg. 1,320 ft.

Leon County

Killough & Tucker's No. 1 G. W. Lee, center of NE 10 acres of 230-ac. tract, J. Burleson Sur.
T.D. 5,641 ft.; P.B. to 5,600; drld. out to 5,620 ft.

Tide Water Oil Co. et al's No. 1 G. W. Burkett, 1,435 feet from SE and SW lines of S. Sanches Sur. No. 7.
S.D. 2,150 ft.

Limestone County

J. Edward Mills' No. 1 Hunt, 200 ft. from N. 350 ft. from W line 24.75-ac. tract, Israel Wood Sur., 3 miles NE of Kosse.
S.D. 3,802 ft.; acidized; testing.

Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
S.D. 3,121 ft.; to acidize.

J. P. McKinney et al's No. 1 N. B. Boyd, 300 ft. NE of Magnolia's No. 26 Sarah McAnulty Sur.
S.D. 1,633 ft.

McLennan County

T. Cunningham's No. 1 M. G. McKee, 940 ft. from S and 2,640 ft. W of 640-ac. tract, M. Snell Survey, near Bruceville.
Location.

Navarro County

W. J. Keeling et al's No. 1 J. F. Rushing 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
T.D. 2,895 ft.; to core.

McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-ac. tract, 1 mile W of Dawson, William Moss Sur.
S.D. 1,460 ft.

Wiggins et al's No. 1 Donoho, 450 ft. from N and 1,101 ft. from E lines in John Couple Sur., SW of Corsicana.
S.D. 1,439 ft.

Rains County

Allen & McClung's No. 1 Giles, T. Cunningham Sur., Abst. 143, 330 ft. from W line and 200 ft. from N line of 105-ac. Giles tract, 5 mi. SW of Emory.
Derrick.

Allen & McClung's No. 1 Ida Bullard, N. Brantely Sur., 1,300 ft. from W line and 200 ft. from N line of 25-ac. tract, 2 mi. SW of Emory.
Derrick.

Allen & McClung & Collard's No. 1 S. P. Cain, 1,350 ft. N and 1,500 ft. W line of J. Harges Sur., 1 mile NW of Emory.
Location.

Red River County

Abercrombie et al's No. 2 Grant, 1,100 ft. N and 4,140 ft. W of P. D. Midkiff Sur., 8 miles NW of Clarksville.
Drlg. 1,078 ft.

R. H. Chew et al's No. 1 J. F. Brooks, 900 ft. N and 600 ft. of W line of 320-ac. tract, B. Gooch Sur., ½ mile S of Bagswell.
Derrick.

Joiner's No. 1 D. Rust, C. C. Wilborn Sur., 234 ft. N and 254 ft. W of most southerly SE cor. of Sur., just south of Avery.
Derrick.

Rusk County

J. W. Shipman et al's No. 1 Citizens Natl. Bank, NE cor. of 125-ac. tract, J. J. Y'Barbo Sur., 4 miles NE of Henderson.
Elev. 432 ft.; drlg. 1,547 ft.

Smith County

W. R. Harrison's No. 1 Rushing, J. Herring Sur. (O.W.D.D.)
S.D. 4,330 ft.

Titus County

S. Rotondi's No. 1 Lillianstun, 1,200 ft. E from NW cor. of J. Bodt Sur. and 330 ft. N, but in W. H. Crawford Sur., 5 miles NE of Talco.
Elev. 301 ft.; derrick.

Van Zandt County

J. Beren et al's No. 1 Bryant, 483 ft. N of same operator's dry hole, Nacogdoches County School Land Sur.
S.D. 1,325 ft.

Beren et al's No. 2 Palmer, 544 ft. from S and 686 ft. from E of 69.5-ac. tract, Nacogdoches County School Land.
S.D. 1,302 ft.

Wood County

Hollandsworth Drlg. Co.'s No. 1 Little Sandy Hunting & Fishing Club, 400 ft. from N and 3,500 ft. E of James Hamblin Sur., 12 miles SE of Mineola.
Base Austin 4,755 ft.; S.D. 5,084 ft.

WEST TEXAS WILDCATS

Week Ending August 10

Andrews County

Crafton Oil Co.'s No. 1 Richard & McWhorter, C NE ¼ Sec. 13, Blk. A-30, 6 mi. SE of NW cor. of county.
Elev. 3,441 ft.; drlg. 4,040 ft.

Fuhrman Pet. Corp.'s No. 2 Ford, 440 ft. from S and 1,320 ft. from E, Sec. 16, Blk. A-43.
Drlg. 4,120 ft.

Gulf Prod. Co.'s No. 1 J. S. Kelley, 1,320 ft. from S and E, Sec. 2, Blk. A-38.
S.D. 1,770 ft.

Humble Oil & Ref. Co.'s No. 4 Means, 1,982 ft. from N and 660 ft. from E, Sec. 12, Blk. A-35.
Rigged up.

Republic Prod. Co.'s No. 1 Boner-State, 2,200 ft. from S and 1,320 ft. from E, Sec. 25, Blk. A-43.
T.D. 4,505 ft.; C.O.

Shell Pet. Corp.'s No. 1 J. S. Means, 660 ft. from S and 1,980 ft. from E lines of Sec. 2, Blk. A-35, P.S.L. Sur.
Drlg. 3,727 ft.

L. G. Stogner et al's No. 1 Mrs. C. George, 660 ft. from S and E, Sec. 25, Blk. A-22, P.S.L. Sur.
Recmtd. csg. 1,650 ft.

Sun Oil Co.'s No. 1 J. S. Means, 1,980 ft. from S and 660 ft. from E lines of Sec. 5, Blk. A-35, P.S.L. Sur.
Location.

J. W. Tripplehorn's No. 1 Ogden, 330 ft. from S and 2,310 ft. from W lines of Sec. 6, Blk. A-46, P.S.L. Sur.
Elev. 3,211 ft.; drlg. 4,320 ft.

Wahlenmaier et al's No. 1 Cox Estate, 1,320 ft. from N and W of Sec. 8, Blk. A-33.
T.D. 157 ft.; set surface string.

Brewster County

F. C. Dodson's No. 1 Texas American Syndicate, 660 ft. from N and E, Sec. 66, Blk. 10, G.H.&S.A. Sur.
Elev. 3,228 ft.; T.D. 1,696 ft.; losing returns.

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,390 ft. from E of Sec. 21, Blk. 352, W. M. Mitchell Sur.
S.D. 2,150 ft.

King & Franklin's No. 1 Gage Est., C Sec. 138, Blk. 22, G.H.&S.A. Sur.
Elev. 4,244 ft.; S.D. 1,805 ft.

G. H. Storey's No. 1 Wilson, 1,980 ft. from N and E lines of Sec. 3, Blk. 212, T.&St. L. Sur.
Elev. 3,609 ft.; S.D. 1,875 ft.

Cochran County

Kelsey's No. 1 Slaughter, C Labour 36, League 150, R.C.S. Lands.
Derrick.

West Texas Development Co.'s No. 1 Slaughter, near C of Labour 53, League 149, Randall Co. School Lands.
S.D. 100 ft.

Coke County

Haggerty et al's No. 1 Gaston, 340 ft. from S and 654 ft. from W, Sec. 11, Jos. Young Sur.
S.D. 3,225 ft.

Concho County

Maverick Oil Co.'s No. 1 Jim Rice, 330 ft. from S and W lines of NW ¼ of Sec. 18, S.N. Ry. Sur.
Location.

Crane County

American Liberty Oil Co.'s No. 1 Tubbs, 796 ft. from S and 330 ft. from W, Sec. 11, Blk. B-27, P.S.L. Sur.
Elev. 2,536 ft.; T.D. 4,050 ft.; set 7-in. csg.

Dobbs Oil Co.'s No. 1 J. Cowden et al, 330 ft. from S and E of N half, Sec. 38, Blk. 1, H.&T.C. Sur.
Drlg. 1,530 ft.

Gulf Prod. Co.'s No. 10 Waddell, C NW ¼ Sec. 11, Blk. B-23.
Elev. 2,775 ft.; T.D. 3,525 ft.; making test.

Gulf Prod. Co.'s No. 1 Henderson, 1,313 ft. from S and 1,322 ft. from E, Sec. 3, Blk. B-23, P.S.L. Sur.
Elev. 2,778 ft.; shut in for storage 3,522 ft.

Gulf Prod. Co.'s No. 1 M. B. McKnight, 660 ft. from S and W, Sec. 9, Blk. B-21.
Elev. 2,778 ft.; T.D. 3,713 ft.; P.B. to 3,650 ft.; fishing for rods.

Gulf Prod. Co.'s No. 1 Waddell, C NW NW Sec. 4, Blk. B-27, P.S.L. Sur.
Drlg. 5,222 ft.

H. L. Holloway's No. 1 Mayberry, 2,440 ft. from SW and SE, Sec. 17, Blk. 35, H.& T.C. Sur.
Fishing 934 ft.

Magnolia Pet. Co.'s No. 1 Edwards, 330 ft. from S and 1,650 ft. from E, Sec. 2, Blk. B-23.
Elev. 2,778 ft.; T.D. 3,615 ft.; P.B. to 3,540 ft.; treated 5,000 gals. acid; may acidize upper show.

Crockett County

Adkins Bros.' No. 1 Shannon, 320 ft. from S and 630 ft. from W of 80 in SW ¼ Sec. 27, Blk. WX, G.C.&S.F. Sur.
Machine.

Leslie-Hillier et al's No. 1 Todd, 1,300 ft. N and 330 ft. E, Sec. 36, Blk. WX, G.C.& S.F. Sur.
Drlg. 830 ft.

Culberson County

Anderson-Prichard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Drlg. 1,808 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
S.D. 2,137 ft.

Dawson County

Adams & Turner's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 4,860 ft.

O. F. Dickinson, trustee's No. 1 C. H. Doaks, 365 ft. from S and 330 ft. from E of SW cor., Sec. 4, Blk. H, E.L. Ry. Co. Sur.
S.D. 150 ft. in new hole.

Ector County

Continental Oil Co.'s No. 1 Wight, 2,300 ft. from S and W, Sec. 21, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 3,276 ft.

Gulf Prod. Co.'s No. 3 Goldsmith, 440 ft. from S and E, Sec. 22, Blk. 44, Twp. 1s, T.&P. Sur.
Cellar.

Gulf Prod. Co.'s No. 2 Goldsmith, 2,200 ft. from N and 440 ft. from E lines of Sec. 15, Blk. 44, Twp. 1s, T.&P. Sur.
Moved in tools.

Empire G. & F. Co.'s No. 2 Wight, 440 ft. from N and W, Sec. 2, Blk. 43, Twp. 1s, T.&P. Sur.
Location.

Eppenauer Drlg. Co. et al's No. 1 Wight, 440 ft. from N and W of NE ¼ Sec. 22, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 3,718 ft.

C. L. Peters' No. 1 Connell, 330 ft. from N and E lines of NW of Sec. 12, Blk. B-16, P.S.L. Sur.
T.D. 3,296 ft.; W.O.C.

Phillips Pet. Co. and Pure's No. 1 C. Cowden, 2,200 ft. from N and 440 ft. from W, Sec. 14, Blk. 44, Twp. 1s, T.&P. Sur.
Elev. 3,100 ft.; T.D. 4,171 ft.; well killed.

Sun and Atlantic O. P. Co.'s No. 1 Holt, Drlg. 4,154 ft.; making 50 bbls. a day by heads.

Sun Oil Co's No. 1-B Wight, 2,200 ft. from S and 440 ft. from E, Sec. 10, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 1,865 ft.

Roy Westbrook's No. 1 Yarbrough & Allen, 440 ft. from N and W, Sec. 26, Blk. B-14, P.S.L. Sur.
Standard tools.

El Paso County

Tri-State Oil Co.'s No. 1 Kinkel, 190 ft. from N and 550 ft. from E, Sec. 227, A.T.&S.F. Sur.
T.D. 985 ft.; U.R. csg.

Fisher County

Tide Water Oil Co.'s No. 1 Newman, 1,758 ft. from N and 1,054 ft. from W of NE¼ Sec. 2½, John Rodman Sur., 4 miles SE of Roby.
Location.

Glasscock County

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur.
Topped lime 9,471 ft.; show oil and gas 9,484-9,520 ft.; increase oil 9,594-9,600 ft. and 9,633-55 ft.; acidized with 6,000 gals. at 10,115 ft.; S.D. for sand reels.

Howard County

John I. Moore et al's No. 1 Snyder, 330 ft. from S and W, Sec. 28, Blk. 30, Twp. 1s, T.&P. Sur.
Elev. 2,302 ft.; S.D. 3,010 ft.; to shoot.

Jeff Davis County

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,323 ft. from E, Sec. 8, Blk. 3, H.&T.C. Sur.
Fishing 1,610 ft.

Jones County

J. W. Barton's No. 1 C. W. Logsdon, 150 ft. from N and 150 ft. W of Wichita Valley R.R. Sur., but in Hy. Millard Sur.
S.D. 1,794 ft.

Campbell et al's No. 1 Rowell, in E half of W half, Sec. 6, T.&P. Sur.
S.D. 2,150 ft.

R. L. Crawford's No. 1 S. R. Walser, 200 ft. from S and W, Sec. 1, T.&N.O. Sur.
1,417 ft., set 8¼-in. csg.

Condor Pet. Co.'s No. 1 Asa Holt, 200 ft. from S and E lines of Sec. 2, Blk. 20, T.&P. Sur.
S.D. 1,902 ft.

Davenport & Hughes' No. 1 J. D. Farrell, 1,100 ft. from N and 1,540 ft. from E. Sec. 6, Blk. 15, T.&P. Sur.
Drlg. 1,875 ft.

Farris & Fikes' No. 2 Jennings, 220 ft. from S and W of NE of SE¼ Sec. 207, B.B.B.&C. Sur.
Location.

Farris & Fikes' No. 3 Jennings, 220 ft. from S and 660 ft. from W of NE of SE¼ Sec. 207.
Machine.

Farris & Fikes' No. 1-A Jennings, 1,980 ft. from S and 150 ft. from W, Sec. 1, I.&G.N. Sur.
Location.

N. H. Martin & Son's No. 1 King, 200 ft. from N and W of E half, Sub. 5, M. Bueno Sur. 197.
Swedging pipe 1,692 ft.

Sandy Ridge Oil Co.'s No. 3 Jones, 1,530 ft.

from N and 660 ft. from W, Sec. 5, Blk. 15, T.&P. Sur.
Location.

Ungren & Frazier's No. 1 Jennings, 320 ft. from S and 660 ft. from E of E½ of NE¼ Sec. 207.
Machine.

Kimble County

Wilcox Oil & Gas Co.'s No. 1 J. Patterson, 200 ft. from N and E, Sec. 1, D.&P.R.R. Sur.
T.D. 2,275 ft.; ran 10-in. csg.

Loving County

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 12, Blk. 57, Twp. 1, T.&P. Sur.
Fishing 2,205 ft.

Mason Oil Co.'s No. 1 Kyle, 1,980 ft. from S and E, Sec. 22, Blk. 55, Twp. 1, T.&P. Sur.
S.D. 2,823 ft.

Lynn County

Hart Oil Co.'s No. 1-A Edwards, 425 ft. from N and 865 ft. from E lines, Sec. 29, Blk. 1, L.&S.V. Sur.
Drlg. new hole at 3,310 ft.

Martin County

Wright & Scott's No. 1 Flannigan, 330 ft. N and E, Sec. 22, Blk. 37, Twp. 1s, T.&P. Sur.
S.D. 100 ft. for csg.

McCulloch County

Poulter et al's No. 2 Wyres, 50 ft. from S and 160 ft. from W, P. W. Rocins Sur.
Fishing 600 ft.

Mitchell County

Lockhart et al's No. 1 W. C. Berry, 330 ft. from N and 2,310 ft. from E, Sec. 86, Blk. 97, H.&T.C. Sur.
Spudder.

Sawtell & Grueber's No. 1 Morrison.
Drlg. 2,778 ft.; show oil 2,555 ft., 2,676 ft., and 2,720 ft.

Nolan County

Harris et al's No. 1 Georgia Institute of Technology, 230 ft. from S and 1,320 ft. from W, Sec. 89, Blk. 24, T.&P. Sur.
Material.

Pecos County

Comanche P. L. Co.'s No. 1 Schreff-Blackmore, 330 ft. from SW and 1,650 ft. from SE lines of Sec. 38, Blk. 3, H.&T. C. Sur.
S.D. 720 ft.

Gulf Prod. Co.'s No. 7 White & Baker, 330 ft. from N and E, Sec. 15, Blk. Z, T.C.Ry. Sur.
Location.

W. Hicks' No. 1 Fromme, 1,980 ft. from NE and 2,310 ft. from SE, Sec. 106, Blk. 10, H.&G.N. Sur.
Location.

C. R. Richards' No. 4 Courtney, 920 ft. from N and W, Sec. 78, Blk. OW, 360 ft. S of No. 2.
Elev. 2,967 ft.; S.D. 382 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 49, Twp. 9, T.&P. Sur.
T.D. 2,520 ft.; pulling csg.

Reagan County

Dobbs Oil Co.'s No. 2 Friend, 660 ft. from W and 1,375 ft. from S, Sec. 3, Wm. Allen Sur.
Location.

Dobbs' No. 1 Friend, 2,310 ft. from S and 660 ft. from W of Blk. 3, Wm. Allen Sur., 3 or 4 miles S of Big Lake.
S.D. 2,464 ft.; P.B. to 2,440 ft.

Culberson & Irvin's No. 1 Ringo.
Fishing 1,812 ft.

Reeves County

Dunigan's No. 1 Davis, 330 ft. from N and W, Sec. 7, Blk. 58, P.S.L. Sur.
Location.

Grisham-Hunter Corp.'s No. 1 T. P. Land Trust, 1,320 ft. from S and W lines, Sec. 27, Blk. 57, Twp. 2, T.&P. Sur.
Drlg. 660 ft.

Herbert Oil Co.'s No. 1 Williams & Walker, 5,280 ft. from S and 1,320 ft. from E, Sec. 17, Blk. 4, H.&G.N. Sur.
Elev. 2,536 ft.; S.D. 4,730 ft.

K. Black et al's No. 1 Reeves, C NW ¼ Sec. 20, Blk. 54, P.S.L. Sur., 22 mi. N of Toyah.
T.D. 2,035 ft.; running csg.

Washington Oil Co.'s No. 1 J. M. Radford Grocery Co., 2,640 ft. from S and 340 ft. from E, Sec. 39, Blk. 56, P.S.L. Sur.
T.D. 502 ft.

Runnels County

John Caster et al's No. 1 Giesecke, 320 ft. from N and 713 ft. from E, Sub. 3, Blk. 139, J. Hughes Sur. 227.
Material.

Wolverton's No. 1 Willingham, 200 ft. from river and in C of Wilhelm-Wolfgang Sur. No. 425, 1¼ mi. SE of Ballinger.
Fishing 3,460 ft.

Schleicher County

John M. Cooper et al's No. 1 Bert Page, 1,990 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
T.D. 6,257 ft.

W. C. Proctor et al's No. 1 Judkins & Spencer, C SW ¼ Sec. 4, Blk. V-28.
Drlg. 1,978 ft.

Scurry County

Coffield & Guthrie's No. 1 Wade, 990 ft. from N and 330 ft. from W, Sec. 116, Blk. 97, H.&T.C. Sur.
R.U. spudder.

M. L. Goss et al's No. 1 J. E. Murphy, 330 ft. from N and 1,650 ft. from E, Sec. 114, Blk. 97, H.&T.C. Sur.
Elev. 2,287 ft.; T.D. 2,343 ft.; C.O.; to put on pump.

Magnolia Pet. Co.'s No. 1 W. M. Scott, 330 ft. from S and W, Sec. 186, Blk. 3, H.&G.N. Sur., 5 mi. S of Snyder.
R.U. standard tools.

Sutton County

Paul C. Teas' No. 1 G. S. Allison, 660 ft. from S and W, Sec. 49, Blk. A, G.W.T. &P. Sur.
Location.

Taylor County

Anderson et al's No. 1 J. C. High, 2,310 ft. from N and 990 ft. from E, Sec. 8, L.&L. Sur.
Rigged up machine.

Hickok's No. 1 Tittle, 660 ft. from N and W, Sec. 37, Blk. 19, T.&P. Sur.
S.D. 660 ft.

Skaggs & Brewer's No. 1 McClure, 330 ft. from N and E, S half SW Sec. 8, L.A.L. Sur.
T.D. 1,910 ft.; C.O.

Tom Green County

Twin Oil Co.'s No. 1 W. E. Green, 1,650 ft. from N and 1,400 ft. from W, L. P. Moore Sur. 169½.
S.D. 315 ft.

Upton County

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
T.D. 12,786 ft.; P.B. to 8,286 ft.; shot with 350 qts. from 8,126-8,270 ft.; knocking out bridge.

Humble Oil & Ref. Co.'s No. 1 Pollock, C of NW, Sec. 4, Blk. M.
Drlg. 8,463 ft.

J. G. McKenzie's No. 1 Taylor, 1,650 ft. from S and 330 ft. from E lines of Sec. 22, Blk. B-2, G.H.&S.F. Sur.
Drlg. 500 ft.

W. C. Ray's No. 1 Cordova-Union, 2,035 ft. from S and 2,895 ft. from W of NE ¼ Sec. 3, A.B. Sur., 5 mi. SE of McCamey.
Material.

Ward County

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 24, H.&T.C. Sur.
T.D. 2,455 ft.; swbng. and testing.

Harry Adams Corp.'s No. 1 Gulf-Bray, 330 ft. from NE and NW, Sec. 14, Blk. 5, H.&T.C. Sur.
Material.

California Co. et al's No. 1 McFarland, 990 ft. from NE and 330 ft. from SE, Sec. 29, Blk. 34, H.&T.C. Sur.
R.U. rotary.

California Co.'s No. 1 Walling & Costley, 2,310 ft. from SE and 330 ft. from NE lines of Sec. 18, Blk. 34, H.&T.C. Sur.
Skidded rig on location.

Caprito's No. 1 Hardage & Wilson, 2,310 ft. from NE and 990 ft. from SE, Sec. 11, Blk. 34, H.&T.C. Sur.
T.D. 2,553 ft.; to shoot.

Eastland Oil Co.'s No. 1 Johnson, 330 ft. NW and NE, Sec. 24, Blk. 34, H.&T.C. Sur.
S.D. 2,570 ft.; perforated csg. 2,490-65 ft.; set whipstock.

Empire G. & F. Co.'s No. 2 Smith, 990 ft. from N and 1,650 ft. from E, Sec. 5, Blk. F.
Location.

Hill et al's No. 1 Clements, 330 ft. from NW and 990 ft. from SW, Sec. 24, Blk. 5, H.&T.C. Sur.
Machine.

Ice & Luce's No. 1 Baker, 1,650 ft. from NE and 330 ft. from NW, Sec. 15, Blk. 5, H.&T.C. Sur.
Drlg. 620 ft.

Skelly Oil Co.'s No. 1 Citizens Natl. Bank, 330 ft. from SE and SW lines of Sec. 40, Blk. 34, H.&T.C. Sur.
T.D. 2,472 ft.; ran csg.

Jerry Sines' No. 1 Brown, 330 ft. from NW and NE, Sec. 12, Blk. 5, H.&T.C. Sur.
T.D. 3,148 ft.; P.B. 3,075 ft.; S.D.

Abell Brothers' No. 1 Potts, 2,310 ft. from SE and 990 ft. from SW lines of Sec. 28, Blk. B-29, P.S.L. Sur.
T.D. 2,391 ft.; to test.

West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 16.
T.D. 2,668 ft.; P.B. 2,567 ft.; drlg. plug; est. 20 bbls. daily.

Winkler County

Barnsdall Oil Co.'s No. 1 Brown & Altman, 2,310 ft. from S and E, Sec. 6, Blk. B-5.
Elev. 2,844 ft.; T.D. 3,218 ft.; P.B. to 3,195 ft.; testing.

Emperor Oil Co.'s No. 1 Halley, 1,650 ft. from S and 330 ft. from E, Sec. 13, Blk. B-13.
Elev. 2,764 ft.; T.D. 2,700 ft.; set csg.

Fox & Butler's No. 2 Brown & Altman, 2,310 ft. from S and 1,650 ft. from E, Sec. 6, Blk. B-5.
Elev. 2,847 ft.; fishing 3,039 ft.

Gulf Prod. Co.'s No. 1 Keystone Cattle Co., NE of NW, Sec. 10, Blk. B-3, P.S.L. Sur.
Elev. 2,942 ft.; shut in 3,520 ft.; flowed 156 bbls. fluid, 6% b.s.&w.

Gulf Prod. Co.'s No. 2 Keystone Cattle Co., NW cor. Sec. 17, Blk. B-2.
Elev. 2,951 ft.; T.D. 3,702 ft.; ran tubing.

Gulf Prod. Co.'s No. 3 Keystone Cattle Co., 330 ft. from N and W of NE ¼ Sec. 11, Blk. B-3.
T.D. 3,370 ft.; flowing.

Gulf Prod. Co.'s No. 4 Keystone Cattle Co., 330 ft. from N and E, Sec. 30, Blk. B-2.
Drlg. 3,700 ft.

Gulf Prod. Co.'s No. 5 Keystone Cattle Co., 330 ft. from N and W of SW ¼ Sec. 6, Blk. B-2.
Elev. 2,952 ft.; T.D. 3,500 ft.; deepening.

Gulf Prod. Co.'s No. 6 Keystone Cattle Co., 330 ft. from N and W of NE ¼ Sec. 16, Blk. B-2.
Elev. 2,950 ft.; drlg. 3,636 ft.

Gulf Prod. Co.'s No. 7 Keystone Cattle Co., 330 ft. from N and W of SW ¼ Sec. 14, Blk. B-2.
Elev. 2,954 ft.; drlg. 3,000 ft.

Gulf Prod. Co.'s No. 8 Keystone Cattle Co., 330 ft. from S and W of Sec. 13, Blk. B-2.
Elev. 2,964 ft.; drlg. 3,454 ft.

Gulf Prod. Co.'s No. 9 Keystone Cattle Co., 330 ft. from S and W of Sec. 18, Blk. B-2.
Elev. 2,946 ft.; set csg. 2,605 ft.

Humble Oil & Ref. Co.'s No. 2-A Walton, 660 ft. from S and W, Sec. 48, Blk. 26.
Drlg. 2,278 ft.

K-D Oil Co.'s No. 1 P. Mitchell, 1,650 ft. from N and 2,310 ft. from E, Sec. 23, Blk. B-10, P.S.L. Sur.
Cable tools rigged up.

J. C. Maxwell's No. 1 Brown & Altman, 2,310 ft. from N and 990 ft. from W, Sec. 6, Blk. B-5.
Elev. 2,844 ft.; T.D. 3,200 ft.; C.O. after shot; made 140 bbls. day.

Mascho Oil Co.'s No. 1 Evans, 1,170 ft. from N and 1,320 ft. from W, Sec. 46, Blk. 73, P.S.L. Sur.
S.D. 50 ft.

Richardson's No. 1 B. F. Jenkins, 440 ft. from S and E, Sec. 13, Blk. 77, P.S.L. Location.

Richardson's No. 1 Walton, 440 ft. from S and 2,200 ft. from W, Sec. 1, Blk. B-3.
Material.

Richardson's No. 1 Walton, 1,010 ft. from S and 330 ft. from W, Sec. 1, Blk. B-3.
T.D. 3,600 ft.; flowed 130 bbls. fluid in 12 hrs., 18% wtr. and 48% mud.

Skelly Oil Co.'s No. 2 Halley, 1,320 ft. from N and 2,200 ft. from E, Sec. 25, Blk. B-11, P.S.L. Sur.
S.D. 3,090 ft.

Skelly Oil Co.'s No. 3 Halley, 2,200 ft. from N and 1,320 ft. from E, Sec. 25, Blk. B-11.
Drlg. 3,200 ft.

Sioux Oil Co.'s No. 1 Lowett, 330 ft. from N and E, Sec. 36, Blk. 26, P.S.L. Sur.
T.D. 2,742 ft.; blew out again.

Sun Oil Co.'s No. 1 Halley, 2,200 ft. from N and 440 ft. from E, Sec. 24, Blk. B-13, P.S.L. Sur.
T.D. 3,170 ft.; P.B. 2,732 ft.; heading once every 14 hrs., 30 to 40 bbls. fluid, 30 to 40% wtr.

Weaver et al's No. 1 T. Morton, 330 ft. from S and E of N half, Sec. 11, Blk. B-12.
Elev. 2,767 ft.; T.D. 2,948 ft.; P.B. 2,937 ft.; shot; C.O.

Westbrook's No. 1 Brown & Altman, 2,-310 ft. from N and E, Sec. 5, Blk. B-5.
Location.

Wilgo Oil Corp.'s No. 1 Campbell, 900 ft. from N and 300 ft. from E, Sec. 2, Blk. 5, P.S.L. Sur., 3 mi. E of Kermit.
Elev. 2,884 ft.; T.D. 4,639 ft.

Yoakum County

C. J. Davidson et al's No. 1 Bennett ,1,320 ft. from N and E, Sec. 678, John H. Gibson Sur.
Elev. 3,557 ft.; T.D. 3,540 ft.; drilled out plug 3,350 ft.

Texas Panhandle Wildcats

Week Ending August 10

Carson County

Danube Oil Co.'s No. 1 Byrum, 308 ft. from N and 409 ft. from E of N½ of NE¼ Sec. 107, Blk. 4, I.&G.N. Sur.
T.P. 3,095 ft.; T.D. 3,167 ft.; P.B. to 3,150 ft.; shot; C.O.

Robert Watchorn's No. 1 Eller, 330 ft. from S and E lines of W½ and SE¼ of Sec. 9, Blk. 7, H.&G.N. Sur.
T.D. 3,801 ft.; P.B. for gas.

Childress County

Alma Oil Co.'s No. 1 Lowe, 660 ft. from N and W of SW¼ Sec. 417, Blk. H, W.&N.W. Sur., 8 of Kirkland.
Drlg. 5,845 ft.

Larkins & Warr's No. 1 M. F. Williams, at common corners of Secs. 507, 483, 484 and 508, Blk. H, W.&N.W. Sur.
Fishing 1,790 ft.

Collingsworth County

Smith Bros.' No. 1 Pierce, C NE¼ Sec. 107, Blk. 21, H.&G.N. Sur.
S.D. 1,030 ft.

Cottle County

Texas Co.'s No. 9 Johnson, 500 ft. N and 313 ft. W of most northerly cor. of J. A. Smith Sur.
Drlg. 3,412 ft.

Dallam County

Eben Warner's No. 1 Jarboe, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.
S.D. 3,450 ft.

Gray County

Bell O. & G. Co.'s No. 1 Furneaux, 434 ft. from S and E lines of SE¼ of Sec. 110, Blk. B-3, H.&G.N. Sur.
S.D. 3,362 ft. for connection.

Clark & Smith's No. 1-B Short, 126 ft. from N and 330 ft. from E of NW 40 acres, Sec. 2, Blk. 1, H.&G.N. Sur.
Drilling Exploration Co.'s No. 1 Lapold, 330 ft. S and W, Sec. 141, Blk. 3, I.& G.N. Sur.
Material.

Tom Doswell's No. 1 Herndon, 330 ft. from S and W lines of SE¼ of SW¼ of Sec. 166, Blk. 3, I.&G.N. Sur.

Farliss et al's No. 1 Ball, 330 ft. from S and E lines of NW¼ of Sec. 6, Blk. 3, B.B. Sur.
Drlg. 3,100 ft.

Hagy et al's No. 1 Chadwick, 320 ft. N and E, Sec. 210, Blk. B-21, H.&G.N. Sur.
Drlg. 2,955 ft.

Harry Foster's No. 1 Johnson, 330 ft. from N and E lines of Sec. 21, L. L. Erwin Sur.
S.D. 321 ft.

Warner's No. 1 Taylor, 330 ft. N and W of SE½ Sec. 8, Blk. 8, A. W. Wallace Sur.
T.D. 3,116 ft.

McLaughlin et al's No. 1 Baggerman, 330 ft. from S and E of NW¼ Sec. 64, Blk. 3, I.&G.N. Sur.
Rig.

Plains Holding Co.'s No. 1 Morse-Gulf 330 ft. S and W. Sec. 57, Blk. 25, H.&G.N. Sur.
Material.

Taylor Oil Co.'s No. 1 Furneaux, 330 ft. from NE and W of S½ of SE¼ Sec. 101, Blk. B-2, H.&G.N. Sur.
Location.

Vulcan Oil Corp.'s No. 1-A Kinnard, 1,180 ft. from N and 150 ft. from W lines of E½ of SW¼ of Sec. 41, Blk. 25, H.&G.N. Sur.
T.D. 2,533 ft.

Hall County

Davis et al's No. 1 Knorpp, 330 ft. S and W, Sec. 7, Blk. A, A.B.&M. Sur.
R.U. rotary.

Hartley County

O. V. Beck et al's No. 1 Matador ranch, 350 ft. from N and W of most northerly NW cor. Sec. 30, Blk. 22, Capitol Syndicate Sur.
Drlg. 602 ft.

Hutchinson County

Barnsdall Oil Co.'s No. 1 Lewis, 330 ft. N and E of W½ of E½, Sec. 7, Blk. 23, B.S.&F. Sur.
T.P. 2,895 ft.; T.D. 3,088 ft.; C.O. and swbng.

Gulf Prod. Co.'s No. 1 Pitcher, 330 ft. N and W, Sec. 19, Blk. M-21, T.C. Sur.
Rig.

Humble O. & R. Co.'s No. 1 Williams, Sec. 137, Blk. 5-T, T.&N.O. Sur.
Drlg. 2,200 ft.

Owl Oil Co.'s No. 1 Moore, 275 ft. S and W of NW 80 acres of NW¼, Sec. 21, Blk. M-21, T.C. Sur.
Drlg. 2,878 ft.

Phillips Pet. Co.'s No. 1 Daniel Dial, 330 ft. from S and 325 ft. from E lines of Sec. 36, Blk. M-23, T.C.R.R. Sur.
Location.

Power Pet. Co.'s No. 1 Hodges, 660 ft. S and E of most southerly 80 acres of S 160 acres of SE 200 acres, Sec. 16, Blk. M-25, T.C. Sur.
Rig.

Stinnett Oil Co.'s No. 1 Starnes, 330 ft. from N and 275 ft. from W of E½ of NW¼ Sec. 22, Blk. M-23, T.C. Ry. Sur.
C.O. 831 ft.

Texas Plains Oil Co.'s No. 1 State, 2,504 ft. SW of SW cor. of Sec. 15, Blk. 47, H.&T.C. Sur., and 330 ft. from N bank of Canadian River.
Drlg. 2,032 ft.

King County

Davis, Heydrick et al's No. 1 Masterson, NE cor. Blk. 50, F. P. Knotts Sur.
S.D. 4,505 ft.

Moore County

Alma Oil Co.'s No. 1 Ward, 330 ft. N and W of SW¼, Sec. 63, Blk. 44, H.&T.C. Sur.
Drlg. 3,703 ft.

Shamrock O. & G. Co.'s No. 1 Bruley & Ryan, C SW¼ of NE¼ Sec. 168, Blk. 3-T, T.&N.O. Sur.
S.D. 2,795 ft.

Ochiltree County

U. S. Oil Corp.'s No. 1 W. R. Norris, 330 ft. S and 990 ft. E, Sec. 212, Blk. 43, H.&T.C. Sur.
Rigged up.

Randall County

English et al's No. 1 Oxnard, 350 ft. from N and 1,320 ft. from E lines of NE¼ Sec. 85, Blk. 2, A.B.&M. Sur.
S.D. 5,685 ft.

Wheeler County

Northern Texas Utilities' No. 1 Calhon, 330 ft. from N and E of SE¼, Sec. 72, Blk. 13, H.&G.N. Sur.
C.O. 2,155 ft.

Smith Bros.' No. 1-B Harlan, 330 ft. from N and 990 ft. from W lines of W½ of SW¼ of Sec. 49, Blk. 24, H.&G.N. Sur.
T.D. 2,583 ft.; 200 bbls. daily.

Everett E. Kerfoot, secretary-treasurer of the Axelson Manufacturing Co. of Los Angeles, Calif., is recovering from an appendicitis operation.

Arthur W. Ankrom and William Orrell, Pure Oil Co. production employes in the Greendale-Midland Field near Mount Pleasant, Mich., have returned from vacation trips to their former homes in West Virginia and Illinois.

PERSONAL PARAGRAPHS

JOHN J. SHEERIN, president of the Shamrock Oil & Gas Company, was a Tulsa visitor Saturday.

L. S. SINCLAIR of the Magnolia Petroleum Company, Dallas, has been made vice president of the company and also of the Magnolia Pipe Line Company.

C. C. WITT, chief clerk, Parkersburg Rig & Reel Company, Tulsa, with his family is visiting in the Ozarks and Fort Smith, Ark., and due to return to Tulsa August 19.

JAMES ANDERSON, vice president of Humble Oil & Refining Company, left Houston last week for New York, from which point he sailed last Friday for a month's trip abroad.

GLENN GARRETT and family are on vacation in the Ozark Mountains in Arkansas. Mr. Garrett is head of the land department of the Gulf Production Company at Fort Worth, Tex.

GEORGE R. MATTINGLY, head of Bedford Petroleum Company, left New York City last week for Havre, France, on the French steamer, Ile De France.

FREDERICK GEDGE, of the International Petroleum Company, Ltd., Toronto, Canada, left last week for Talara, the main office of the company's operations in Peru.

W. B. LAUGHLIN, in the geological department for the Shell Petroleum Corporation at Houston, Tex., has been transferred to the land department with headquarters at Shreveport, La.

W. B. BECKER, formerly in the paleontological department for Shell Petroleum Corporation at Houston, Tex., has been transferred to the scouting department with headquarters at Shreveport, La.

GEORGE HAYDEN, of the National Refining Company, who has been in Petrolia, Ontario, in connection with the opening of the new Canadian Oil Companies, Ltd., refining unit, has returned to his home in Coffeyville, Kans.

DR. JAMES STUART and family, of Kincardine, Ontario, recently visited MR. and MRS. F. L. BRAYBROOK at Petrolia, Ontario. Doctor Stuart was formerly on the International Petroleum Company geological staff in South America.

J. W. REID, counsel for Sinclair Refining Company, and MRS. REID returned to New York City from a European trip last week on the Ile De France of the French line. MRS. HARRY SINCLAIR accompanied by her son and daughter also returned to New York on the Ile De France.

HARRY F. SMITH, president of the Fullerton, Calif., branch of the Bank of America, and his family are in Tulsa, guests of MRS. SMITH'S brother, PAUL P. LYONS, of the Stanolind Crude Oil Purchasing Company, and her uncles, CHARLES E. and JOHN W. HURLEY, of the Hurley Gasoline Company.

E. P. ROWE and family, of Toronto, recently visited Chatham, Ontario, where Mr. Rowe inspected oil and gas operations in which he is interested.

O. C. NEEDHAM, Fort Worth, Tex., superintendent for the Gulf Production Company, in charge of the Panhandle and North Texas Divisions, is making an auto tour to points in Colorado with his family.

TOM Q. WILLIAMS, in the executive department of the Gulf Production Company, Fort Worth, Tex., is the proud father of 6½-pound THOMAS McCORMICK, born at Methodist Hospital in that city on August 5.

MR. and MRS. CHARLES FITZGERALD, Fort Worth, Tex., are taking an extensive trip through Mexico, going from the east to the west coast. Mr. Fitzgerald is assistant to the president of the Sinclair Prairie Pipe Line Company.

HARRY KNIGHT of Toronto recently made an inspection of oil and gas operations in the Kent, Ontario, fields.

W. S. HERRON, oil operator, of Calgary, Alberta, is inspecting mining properties in the Barkerville district of British Columbia.

O. G. DEVENISH, president of Devenish Petroleums, Ltd., has been nominated as Social Credit candidate for Calgary for the forthcoming Alberta provincial election.

F. E. HEATH, chief petroleum engineer for the Sun Oil Company, Dallas, Tex., accompanied by his family, is making a trip by way of the Great Lakes to his home in Maine.

K. B. NOWLES, chief engineer, Forest Oil Corporation, Bradford, Pa., was in the Nowata, Okla., district last week consulting with field men of Forest Production Corporation subsidiary.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

August 18, 1910

The Central Fuel Oil Co., organized to take over a large number of northern Oklahoma oil properties, has paid the first installment on the options, which payment amounts to $1,250,000. Much mystery surrounds this deal which has been under negotiation for over a year. Percy McConnell, George Priestly, and W. H. Johnson, acted as go-betweens, and brought it to its present status. It is believed English money paid the first installment. The whole transaction will involve the payment of $5,100,000.

John H. Galey, of Pittsburgh, Pa., is in California and will increase his holdings of prospective oil land in that state.

M. H. Mosier, Oklahoma oil producer, after spending $3,000 in travel about the United States looking for a home site, settles on Hollywood, a suburb of Los Angeles, Calif.

20 YEARS AGO

August 19, 1915

European news writers do not report oil field developments as we Americans do. For example, the Petroleum Review reports on the Moreni, Rumania, Field, six wells are boring, three are in eruption.

The use of powerful suction pumps to produce old wells in Oklahoma is said to be draining the sands on neighboring leases, which depend on the old fashioned pumping method, and the Corporation Commission has been appealed to, but without results

M. J. Flanagan, boiler inspector for the Prairie Oil & Gas Co., has been promoted to be foreman of the company's shops in Tulsa.

Charles S. Smiley of Clarksburg, W. Va., veteran oil field supply man, dies at the age of 54 years.

10 YEARS AGO

August 20, 1925

The entire capital stock of the Waite Phillips Co. is purchased by Blair & Co., bankers of New York. No figures were given out officially, but the deal is supposed to have involved $25,000,000. Waite Phillips started in the oil business 18 years ago at the age of 25. He is a resident of Tulsa.

Five wells in the Braman Pool in Kay County, Oklahoma, produced 18,245 bbls. in 24 hours one day this week, an average of 3,649 per well.

The gross production report for the second quarter of the year in Oklahoma shows that 14 operators (corporations, firms and individuals) produced over 60 per cent of the state's oil output and that 64 operators produced 78 per cent of the total. There are 1,571 producers' names listed on the report. An average of 459,072 bbls. per day was produced during the period.

JOHN HEDLUND, of Wainwright, Alberta, is working on Plains Petroleum's No. 1 deep test near Taber, Alberta.

J. S. ABERCROMBIE, independent operator of Houston, Tex., is spending a few weeks' vacation in California.

MAURICE PARTIOT, consulting engineer of Wallace, Muller & Company, New York, is now in France on a business trip.

A. H. VISSER, of Okotoks, Alberta, has returned from Taber, Alberta, where he was erecting a derrick for Plains Petroleum, Ltd.

BILL BROWN, geological scout for the Shell Petroleum Corporation at Houston, Tex., is spending a two weeks' vacation at Galveston, Tex.

BEN E. LINDSLY, chairman, new pools committee, Washington, D. C., was in Oklahoma last week on Department of the Interior business.

W. W. CLAWSON, assistant chief geologist for the Magnolia Petroleum Company, Dallas, Tex., is spending his vacation at points in New Mexico.

L. STUART, president of Wailes Dove-Hermiston Corporation, New York City, with MRS. STUART and their four children, are now on an automobile tour of Europe.

L. B. BERRY, scout for the Shell Petroleum Corporation in the East Texas district, has been transferred to the West Texas district, with headquarters at Eastland or Abilene, Tex.

L. S. SINCLAIR, director of the Magnolia Pipe Line Company and Magnolia Petroleum Company, and assistant to D. A. LITTLE, president, has been made a vice president of the two companies.

PAUL KELTING, division sales manager for the Emsco Derrick & Equipment Company at Houston, Tex., has returned from a three weeks' vacation spent in Panama, Cuba, and Honduras. Mr. Kelting's

parents reside in Panama, and his visit this year was the first visit home he had made in 19 years.

MISS RUTH NEWTON, secretary, Tulsa office of Conservation Department of Oklahoma Corporation Commission, is away on two weeks' vacation in Galveston, Tex.

DR. E. R. WEAVER, chief of the gas division of the U. S. Bureau of Standards, collapsed after a hearing in the federal courthouse at Fort Worth, Tex. A physician said he had suffered a stomach hemorrhage. He was taken to a hospital and was said to be "resting as well as could be expected."

FRED ELVES, of Calgary, Alberta, has returned from a trip to Vancouver, British Columbia, and other Pacific Coast cities.

H. J. HASLETT, of Vancouver, British Columbia, a director of Pacalta Oils, Ltd., has finished a motor tour of the southern Alberta fields and will return home by way of Yellowstone National Park.

HORACE E. CATTERMOLE, ship dispatcher of the Union Oil Company, was recently appointed one of a committee of three to centralize control of radio distress signals and co-ordinate distress facilities in the South Pacific area. This work was requested by naval officials.

DON W. PAYNE, of the geological department of the Sinclair Prairie Oil Company, at Wichita, Kans., and MRS. PAYNE, are taking an automobile trip through the East. While East they will make a short visit at Mr. Payne's boyhood home, at Marietta, Ohio, as guests of his parents.

W. MAURICE THOMPSON has been appointed editor of the Sign of the Shell, employe and dealer publication of Shell Eastern Petroleum Products, Inc. He was formerly associated with the house organs of the Western Electric Company and joined the Shell organization last December.

WILLIAM MOELLER, JR., vice president of the Southern California Gas Company in charge of production and transmission, will be named by the nominating committee of the American Gas Association as chairman of the Natural Gas Department when the association meets in Chicago on October 14.

W. H. CORREA, general manager of the lubrication department of the Socony-Vacuum Oil Company, arrived in Los Angeles, Calif., from New York and while on the Pacific Coast will attend a conference of General Petroleum Corporation's lubrication men to be held in San Francisco, August 15 to 17.

RICHARD H. MUIRHEAD, of Victoria, British Columbia, is making a tour of the Southern Alberta oil fields.

E. LLOYD BYERS, assistant manager, Parkersburg Rig & Reel Company, Tulsa, Okla., and family are spending a two-week vacation in Colorado Springs, Colo., returning August 19.

G. C. TERRY, sales manager for the eastern oil fields for the Wall Rope Works, Inc., is returning to Parkersburg, W. Va., after spending two weeks in the Mid-Continent area. Mr. Terry's family accompanied him on his trip.

MISS TENNIE FLORE, who heads the schools of the Standard Oil Company of New Jersey on the Island of Aruba, is visiting her sister, MRS. J. E. HILL, in Midland, Tex.

WILBERT McCALLUM, acetylene welding superintendent of the Union Gas Company at Sarnia, Ontario, is recuperating from severe burns sustained when a gas main exploded.

L. D. MANN, assistant general superintendent of refineries for the Empire Oil & Refining Company, left Tulsa Tuesday to spend several days in the New York offices of Cities Service Company.

"99" Gave Chance He Needed

The secretary-treasurer of the "99 Pumping Company," a one-well producing organization in Batson, Tex., in the early days of that field, was ill and went to his old home in Ohio. T. F. Birmingham, bookkeeper, had saved a little money out of his $75 a month and he bought the secretary-treasurer's stock. Also he became secretary-treasurer.

T. F. BIRMINGHAM

Soon afterward opportunity No. 2 came as a result of fire which destroyed about everything above-ground on the neighboring 10-well lease of the Honeymoon Oil Company. Young Birmingham wired W. B. Sharp, president of the Honeymoon, about the fire and asked for an operating lease on the property, which now would require extensive reconditioning. The outcome was a deal which gave the 99 Pumping Company an operating lease on the 10 wells, with a percentage of the oil produced. Veteran operators had approached Mr. Sharp with a similar proposition, and when he was asked why he had given a newcomer preference he explained that the telegram had got him out of bed at 2 o'clock in the morning, and he figured that a fellow who got the jump on others that way should make a good operator.

It was decided to change the name of the 99. Mr. Birmingham picked up a little dictionary and happened to open it at a page which contained the word "Margay," defined as a species of wildcat. So the company became the Margay Oil & Gas Corporation and later Margay Oil Corporation. Margay, of which Mr. Birmingham has been president many years, has production in Oklahoma and Texas.

Mr. Birmingham was born in Beebe, Ark., near Little Rock. After a course at Baylor University he got a job as bookkeeper in a bank and later he took a similar job with the 99. He and Mrs. Birmingham reside in Tulsa.

F. H. STOVER, of Chatham, Ontario, attended the funeral of the late CHARLES MASCHO at Cleveland recently.

S. H. THOMPSON, chief geologist for the Magnolia Petroleum Company, Dallas, Tex., has returned from a vacation spent at his home in New York.

CHARLES WALKER, chief accountant of the Canadian Oil Companies, Ltd., of Toronto, Ontario, made his official visit to the Petrolia refinery recently.

SIDNEY S. SMITH, manufacturing department, Shell Petroleum Corporation, St. Louis, Mo., was in Tulsa last week arranging to move his family to St. Louis.

GEORGE LOCHNER, drilling superintendent on Moose Oils' No. 2, on the Moose Dome west of Calgary, Alberta, has returned to Great Falls, Mont., for a short visit.

PAT ADAMS, drilling contractor in charge of the Terminal Oil Company's test in southern Alberta, is spending a few weeks at Sylvan Lake, Alberta, summer resort.

FRANK R. HENRY and S. MYRON ZANDMER, of Los Angeles, Calif., who have been supervising drilling operations for the Terminal Oil Company in southern Alberta, are spending a holiday in California.

ARTHUR J. KERR, manager, Pittsburgh Equitable Meter and Merco Nordstrom Valve Companies, Tulsa, made a business trip to Shreveport, La., and vicinity last week.

TED POUND, formerly of Chickasha and Oklahoma City, has been appointed conservation officer in the Okmulgee district to succeed MONTE VANDEVENTER, who will engage in oil interests in the East Central Oklahoma fields. Mr. Pound was formerly with the Shell Petroleum Corporation in West Texas, New Mexico and Oklahoma.

DON EPPERLY, in the engineering department of the Sinclair Prairie Oil Company, Fort Worth, Tex., was married to MISS MARY ROACH in that city on August 3. They are now honeymooning in Southwest Texas.

HENRY WOODHOUSE, president of the Midwal Oil & Gas Company, with MRS. WOODHOUSE and son HAROLD, have returned to Toronto after inspecting drilling operations in the Dover Field near Chatham, Ontario.

CLAYTON G. DORN, of Bradford, Pa., secretary and treasurer of the Forest Oil Corporation, who has been visiting his brother, CAL DORN, in Denver, Colo., has returned to his home accompanied by his brother. They traveled in CLAYTON DORN'S land yacht and en route visited numerous New Mexican points.

L. E. SLOAN, superintendent for the Stanolind Oil & Gas Company, has been transferred to Midland, Tex., and promoted as district production superintendent. He succeeds W. L. GEHR, who was recently transferred to South Texas.

GUY L. TATE, associated with the Magnolia Petroleum Company since 1911, has been made secretary of that company and of the Magnolia Pipe Line Company. Mr. Tate worked on the construction of the Magnolia's first pipe line from Electra to Beaumont in 1912.

FOREST DORN, president of the Forest Oil Corporation, Bradford, Pa., who with his family have been visiting in Europe, will arive home in Bradford, Pa., on August 19. The Dorns will be accompanied by JOHN BIRD, son of JAY BIRD, Bradford and Mid-Continent oil producer.

EARL GRIFFIN, production superintendent for the Phillips Petroleum Company, has been transferred from Wichita, Kans., to Midland, Tex. He succeeds L. B. HOLLAND in charge of the West Texas and New Mexico district.

DWIGHT FUNK, WILLIAM PARNELL and MASSENA MURRAY, with Conservation Department of the Corporation Commission in the Oklahoma City Field and captains in Oklahoma National Guard, are at Fort Sill Military Reservation for two weeks' summer training.

THOMAS O. GRISELL, sales manager of the Kendall Refining Company of Bradford, Pa., formerly executive secretary of the Pennsylvania Grade Crude Oil Association in Oil City, Pa., will be the principal speaker at the Drake Day celebration in Titusville, Pa., on Tuesday, August 27.

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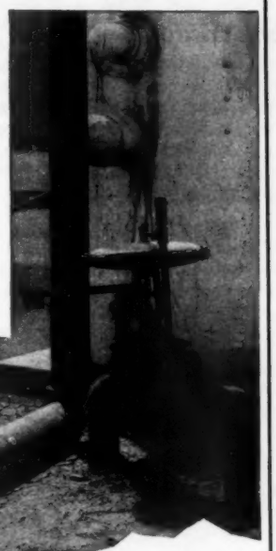
Correspondence regarding any special need of pressure control will be given careful attention.

The regulators here seen are in operation in a flowing plant of an active Oklahoma oil field.



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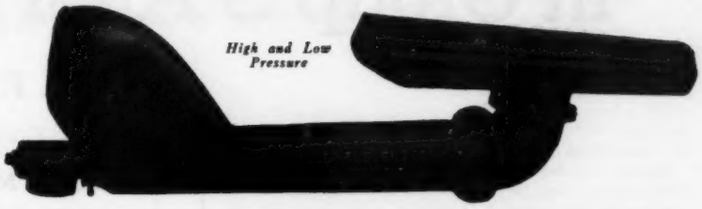

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Planning for a Sturdy Gasoline Market in Group 3 After Big Demand Ends

By T. F. SMILEY

Gratified with the behavior of the gasoline market in the Group 3 area this year, refiners now are giving thought to the policies they must adopt if the present favorable conditions are to be extended beyond the seasonal period of high consumption, which may be expected to start tapering off with the close of August. Not in years has gasoline experienced so well-sustained and so well-stabilized a market as it has in the five months since the middle of last March.

Various factors have contributed to the improved status of motor fuel, but especially high place must be given to the two inter-refinery buying programs, one applying to East Texas and the other to the rest of the Mid-Continent. Each has precluded serious accumulations of surplus stocks.

Practical Demonstration Seen

Refiners who are disposed to consult only their own private interests have witnessed a practical demonstration of what can be accomplished by wise leadership and co-operative action. Upon the extent to which this primary lesson in business strategy has been learned rests largely the course of the gasoline market after the stimulus of extraordinary consumption has been removed.

It should be noted that the present sturdy market began months before the season of heavy demand set in. That fact lends cogency to the contention that it need not go to pot when the big summer trade ends. The same farseeing common sense that built a steady market last spring can keep it going in the approaching fall and winter.

Leaders in the industry have been urging refiners to cut their runs sharply in the second half of August so that inventories will be virtually nil with the close of the vacation season and from that time on to keep their runs closely in line with their ascertained consumer demand. Belief is general that in the northern part of the Mid-Continent territory there will be little difficulty in achieving this objective. There probably would be similar confidence with regard to East Texas if it were not for the unsavory record of that area prior to 1935.

Refined Oil Market Barometer

As a season of extraordinarily heavy gasoline consumption approaches its close, hope is expressed that the marketing division will be able to preserve the ground it has gained. Whether the coming fall and winter will see a steady market, or a disordered one, is believed to depend primarily upon the willingness of individual refiners to keep their crude runs adjusted strictly to consumer demand.

MID-CONTINENT. Gasoline steady. Naturals up. Burning oils firm. Heavy fuels uncertain.

EAST COAST. Gasoline firm. Little change in other products.

GULF COAST. Gasoline firm. Kerosene stronger. Good demand for burning oils.

PENNSYLVANIA. Market unsettled. Kerosene in seasonal slump.

CALIFORNIA. Shutdown of many small plants has reduced price-cutting.

CHICAGO. Gasoline strong. Kerosene higher. Heating oils firmer.

Hopeful About East Texas

In this connection, however, it is pointed out that so long as the federal tender board is operating no refiner guilty of wanton overproduction could do much harm to the general market, though he might prolong disordered conditions inside his state. Besides that, East Texas since last February has benefited in so marked a way from inter-refinery buying, which has provided an outlet for virtually all its legitimately manufactured gasoline, that it seems unlikely any refiner would be so stupid as deliberately to adopt destructive practices to gain a little temporary private profit.

Tank car prices in the Group 3 area were unchanged this week, and the tremendous consumption which began in July continued. Motor travel is now so heavy that some sections of main highways, particularly those near large cities over week-ends, resemble city streets, so thick are the streams of cars passing over them.

Naturals Up Again

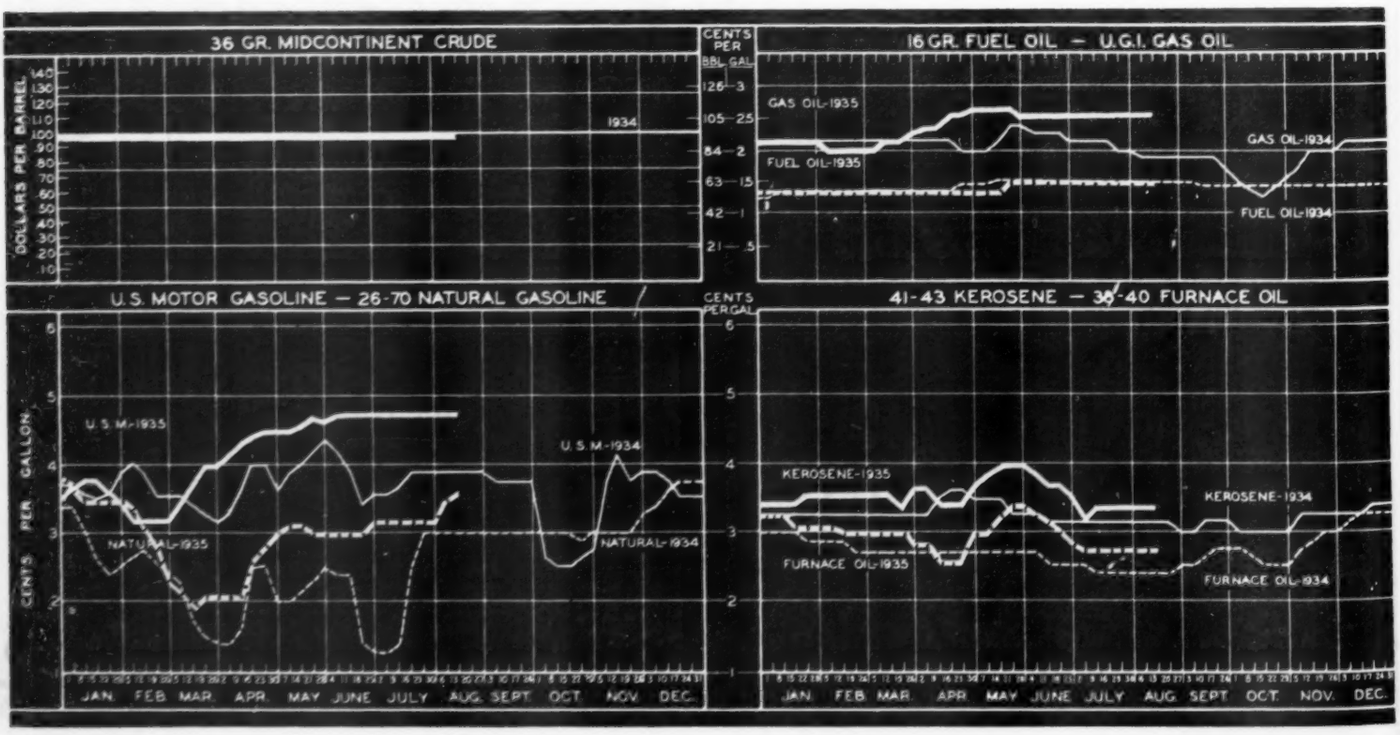
The vigor pervading the natural gasoline market manifested itself this week in another upswing in prices throughout the list. The shutting in of the Panhandle Field in Texas, though it was of an "on again, off again" character because of suits directed at the State Railroad Commission's enforcement of the natural gas conservation law which went into effect August 1, had a bracing effect. It was believed probable prices would undergo no further advance till litigation affecting the area had been disposed of.

The present buying of natural is largely for sweetening gasoline which refiners are withdrawing from storage. Demand was firm.

Low-Grade Fuels Uncertain

Predictions were made that low-grade fuel oils might find difficulty in preserving their present price levels. It was said that railroads, heaviest consumers of this material and usually ready to oblige when possible, had been taking more on their contracts than they conveniently could handle, with the result that not only their storage tanks but many of their tank cars were filled. Unless refiners process large quantities of the fuel oil accumulating on their hands, lower prices seemed likely. In East Texas, however, where shading of prices had been reported recently, the situation was said to be a little better this week.

Lubricant prices were unchanged and the movement was reported satisfactory.



Standard's Return to Flat Schedule in New Jersey Features Week in East

By C. O. WILLSON

NEW YORK, Aug. 12.—A possible ending of the policy of quoting delivered tank car, dealer and retail gasoline prices on a fractional cent basis which takes into consideration the varying rail transportation costs from terminals to consumer points was indicated here the past week in the action of the Standard Oil Co. of New Jersey in returning to a flat price schedule throughout the state of New Jersey. The company, effective August 8, established a delivered tank car price of 7 cents on regular grade motor fuel, 9.5 cents dealer tank wagon and 13 cents service station throughout the state. These prices, which are exclusive of a 3-cent state and 1-cent federal tax, were met by other large and small distributors in the state on that date. The change in effect brought reductions in prices as high as .6 cent per gallon with maximum of .2 cent.

It is said that the net back to refineries and water terminals of the New Jersey Standard in New Jersey will be practically the same as before. Indicative of how the plan works, the gasoline price at Newark, N. J., which is close to the company's Bayonne group of refineries, was advanced from 16.8 to 17 cents, the new general retail price, while the price at Atlantic City was reduced from 17.5 to 17 cents. The .7 cent spread in price between these two points in the past represented the difference in transportation charges.

This action furnished about the only topic of discussion in an otherwise dull refinery market in the eastern area. Gasoline prices, except for the changes at consumer points in New Jersey and a 1-cent reduction at Rochester and other smaller western New York state points, were generally firm. In New York harbor, tank car quotations ranged from 5¾ to 6½ cents, depending on octane rating, the same schedules that have been in effect for several weeks. Sellers on the whole have been pleased with the steadiness shown in this market despite the recent predictions that quotations were headed for lower levels. While spot trading is not active the movement on contracts is running ahead of last year and there are no indications that important sellers have material on which they are willing to give price concessions to secure orders. Most of the trade are of the opinion that this situation will continue over the balance of the month at least.

The Gulf gasoline market was also firm. One refiner there is reported to have sold a 70,000-bbl. coastwise cargo of middle octane U. S. Motor for 5½ cents. This is one-eighth to one-fourth cent above recent quotations on that product. The Gulf export gasoline market continues inactive with no changes in quotations.

Price lists on other products are practically unchanged from last week. Several sellers say there are more inquiries for kerosene and all grades of furnace oils but the actual movement continues slow. Residual fuels, Diesel fuels and gas oils are reported firm. More export inquiries were reported for wax and some grades of paraffin base lubricants including blended motor oils but this business does not at this time point to improvement in price conditions.

Change in Policy

The return to a flat price policy by the Standard of New Jersey brought considerable comment and speculation within the trade. No official explanation was given for the change. The company adopted the plan of varying prices at consumer points depending on transportation charges in 1930. This pricing plan starts at refining and water terminals at base points at which tank car prices were established. The price to a tank car jobber was determined by adding the rail transportation charge to the base price and thus arriving at a delivered price. On regular grade gasoline, 6 cents was added to this delivered tank car quotation in establishing the retail gasoline prices exclusive of taxes. Dealers were allowed fixed margins under the retail price, the differentials recently calling for 3½ cents on divided accounts and 4 cents on undivided. This general plan spread to include the Standard of Louisiana as well as the Standard of New Jersey marketing territories.

The Socony-Vacuum Oil Co., Inc., adopted a similar policy for New York State and New England. It was also planned that the tank car prices at Atlantic Seaboard refineries and terminals should take into consideration the Gulf Coast market with a differential above the latter quotations to cover cost of tanker shipments. It was pointed out at the time that this procedure made the Gulf Coast market the base for the entire eastern area and in effect also resulted in a close relationship with the Mid-Continent. The thought back of this program was to make eastern markets directly responsive to open market conditions of the Mid-Continent and Gulf Coast where changes in conditions within the industry are quickly reflected in refinery quotations and thus keep away from wide spreads in eastern and Mid-Continent quotations with their direct reflection in unsettled markets.

The plan, it is said, has not been a 100 per cent success and may be permanently amended. In the case of New Jersey it has been found that a difference up to .6 cent per gallon in retail gasoline prices within the state had an affect on consumption. Consumers whenever possible made their purchases in the towns and cities with the lowest price. This has brought complaints from the dealers and jobbers at the high price points with a tendency to hold their business. This is particularly true of the commercial account business which constitutes a substantial part of the motor fuel demand in New Jersey. Thousands of trucks, busses, and lighter commercial vehicles daily travel across the state and can easily arrange their operations so that they fill their gasoline tanks at points with the lowest prices.

It has also been found that a state like New Jersey, which is almost surrounded by the ocean and navigable waterways, there are numerous water terminals which complicate the plan of basing prices on the terminals owned by one company. Competitive companies have terminals closer to a particular consuming point and their transportation costs are less. This also results in a price-cutting tendency particularly in a weak market.

The plan of having posted prices with fractions of a cent to take care of the differences in transportation costs is also objectionable to some marketers with strong support from others. The objectors state that the fraction of a cent, unless it is one-half cent, confuses the customers who usually lose a cent in their total purchase because the amount involved does not come out even. They would like to see retail prices moved up and down with one-half or 1-cent changes.

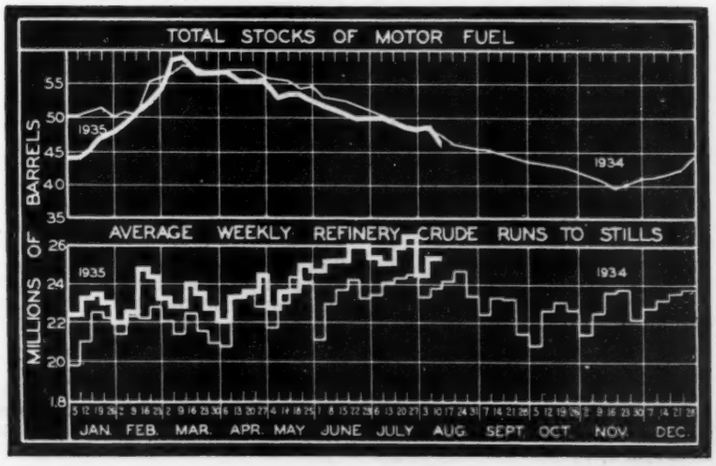
Prices

Water white kerosene is quoted at 3⅞ to 4 cents at the Gulf and 1 cent higher in New York harbor. The top tank car quotations on furnace oils are No. 1, 5 cents; No. 2 and 3, 4 cents, and No. 4, 3⅝ cents. These prices are quoted by major sellers but they have been shaded in spot sales since the first of the month. Gas oil is generally quoted at 4 cents with $1.05 for Bunker C to marine trade and $1.65 for Diesel fuel. A few sales of crude scale wax under 2 cents have been reported. Prices on refined grades appear firm.

American Petroleum Institute Weekly Refinery Statistics

Week Ending August 10, 1935

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	485,000	14,516,000	12,663,000
Appalachian	94.8	95,000	2,006,000	844,000
Indiana, Illinois, Kentucky	95.9	360,000	8,679,000	5,083,000
Okla., Kans., Mo.	84.8	296,000	4,641,000	4,849,000
Inland Texas	48.5	104,000	1,067,000	1,724,000
Texas Gulf	96.4	525,000	4,934,000	11,410,000
Louisiana Gulf	96.4	108,000	1,135,000	4,146,000
N. La. and Ark.	90.0	42,000	285,000	411,000
Rocky Mountain	61.9	42,000	666,000	770,000
California	92.6	498,000	8,357,000	64,546,000
Total United States	89.5	2,555,000	46,286,000	106,446,000



Market Record of Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City. Members New York Stock Exchange and New York Curb Exchange

1935 High	1935 Low	Week ended Aug. 10 Sales	Week ended Aug. 10 High	Week ended Aug. 10 Low	Week ended Aug. 10 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
70¾	48½	2,700	68⅜	65½	67	Amerada Corp.	788,675	N.P.	50cQ	7-31-35	$2.00	55⅝	39	47⅝	18½
28	21⅜	13,300	24⅞	23	24¾	Atlantic Refining	2,673,834	$25	25cQ	9-16-35	1.00	35¼	21½	32½	12⅝
10⅝	5⅞	35,600	9¼	8⅜	9	Barnsdall Corp. A	2,195,397	$5	....	5-11-31	....	10	5⅞	11	3
11	3⅝	154,900	11	9⅛	11	Columbia Gas & Elec.	11,610,036	N.P.	....	5-15-34	‡ .25	19¼	6⅝	28⅛	9
10½	6½	49,600	9¼	8⅜	8⅞	Consolidated Oil Corp.	13,996,072	N.P.	14c	10-31-34	.42	14¼	7¼	15¾	5
23	15⅛	32,000	21⅜	20½	21¼	Continental Oil of Delaware	4,738,593	$5	25c	7-31-35	.50	22¾	15⅜	19⅝	4⅞
20⅝	11⅜	11,700	20½	19	20	General Asphalt	387,149	$10	....	6-15-32	....	23½	12	27	4⅝
17⅜	9⅛	10,200	3⅛	2¾	2⅞	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	5⅝	2½	7⅝	1⅞
1⅞	⅜	12,700	⅞	⅜	⅝	Louisiana Oil Refining	1,302,158	N.P.	....	.....	....	3⅜	⅜	4	⅝
13¾	9½	11,600	11⅝	10⅜	10¾	Mid-Continent Petroleum	1,857,912	$10	15c	5-15-35	.50	14¾	9⅛	16	3¾
19	9	2,400	17½	16	16	National Supply of Delaware	382,591	$25	....	5-15-31	....	21⅛	10	28⅝	4
14⅛	9¼	21,100	12	10¾	11⅛	Ohio Oil Co.	6,563,377	N.P.	15c	6-15-35	.45	15⅞	8½	17⅝	4¾
9½	6¾	10,300	9⅛	8	9	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.40	9⅜	5½	9½	3
15¾	6½	600	⅞	¾	⅞	Panhandle P. & R.	198,770	N.P.	....	.....	....	2½	⅝	4¼	⅝
23⅝	13¾	73,200	23⅝	22	23½	Phillips Petroleum	4,154,687	N.P.	25c	8-30-35	1.00	20¾	13⅝	18⅝	4¾
11⅝	6½	5,700	9¾	8⅞	9⅝	Plymouth Oil Co.	1,050,000	$5	25c	3-30-35	75c & 4% Stk.	16¾	7¼	17⅝	6¾
10¼	5⅞	23,200	9½	8⅜	9⅛	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	14⅞	6⅛	15⅝	2½
44	29½	1,700	44	42½	44	Royal Dutch N. Y. shares	fl. 503,642,000	fl. 100	$1.70	8-1-35	1.35	39½	28⅝	39¾	17⅝
35⅞	20¾	5,300	32	30⅛	31½	Seaboard Oil of Delaware	1,244,283	N.P.	15cQ†	9-15-35	1.00	38⅜	20¾	43⅜	15
11½	5½	21,800	11⅛	10⅝	11	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	11½	6	11⅝	4
98	63½	1,100	98	97¼	98	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	89	57	61	28½
18¾	5	11,600	6½	6	6⅜	Simms Petroleum	461,698	$10	$10 liq.	7-5-35	.55	17⅛	7¼	12⅜	4⅞
11⅝	6½	1,900	10¾	10	10	Skelly Oil	1,008,514	$25	....	12-15-30	....	11½	6	9⅞	3
15¾	11	121,000	13⅞	11½	11¾	Socony-Vacuum	31,019,694	$25	15cSA	9-15-35	.60	19⅞	12½	17	6
38⅞	27¾	20,500	25⅞	34½	35¼	Standard Oil of California	13,102,900	N.P.	25c	9-18-35	1.00	42⅞	26½	45	19½
27¼	23	33,100	27⅛	26⅛	27⅛	Standard Oil (Indiana)	15,215,677	$25	25cQ	6-15-35	1.00	32¾	23¼	34	17
32	25½	No sales ..	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	2.00	41	26	39⅞	12¾
50½	35¾	23,100	48⅜	46	47	Standard Oil of New Jersey	25,856,081	$25	50cSA‖	6-15-35	1.25	50⅛	39¼	47½	22¾
75½	60½	2,800	66½	65	65⅛	Sun Oil	1,733,013	N.P.	25cQ	9-16-35	$1 & 9% Stk.	74¼	51½	59	35
23⅜	16½	37,300	20½	19⅛	20	Texas Corp.	9,486,417	$25	25cQ	7-1-35	1.00	29⅜	19⅝	30⅛	10¾
6⅜	3¼	18,200	6⅜	5¾	6¼	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	....	6½	2½	6½	1⅜
12	7⅝	19,700	10¾	10	10¾	Tide Water Associated	5,618,672	N.P.	25cQ	9-6-35	....	14⅜	8	11⅝	3⅛
102½	84	3,200	100½	99¾	100	Tide Water Associated pfd.	666,524	$100	$3‖	7-1-35	§8.50	87	64½	65¼	23½
20⅛	14⅜	12,500	18½	17½	18⅜	Union Oil of California	4,386,070	$25	25cQ	5-10-35	1.00	20½	11½	23⅜	8½
26½	20⅞	500	24½	24¼	24¼	Union Tank Car Co.	1,200,000	N.P.	30cQ	6-1-35	1.20	25¾	15⅝	22⅜	10½
2⅝	1	1,500	2¼	2⅛	2⅛	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¾	2	5½	2

*Ex-dividend. †Plus extras. ‡Payable in preferred stock. §On account of accumulated and current dividends. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Dividend of one-half share Barnsdall Refining Corp

Market Record of Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City. Members New York Stock Exchange and New York Curb Exchange

1935 High	1935 Low	Week ended Aug. 10 Sales	Week ended Aug. 10 High	Week ended Aug. 10 Low	Week ended Aug. 10 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
42	30½	200	42	42	41¼	Buckeye Pipe Line Co.	200,000	$50	75cQ	6-15-35	$3.00	38	26	39¾	25
4¼	1⅝	6,700	3⅜	2½	3	Carib Syndicate	799,020	25c	....	.....	....	5½	1½	7¾	⅛
157	115	No sales ..	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1Q†	6-28-35	11.50	150	116	129	71
2¼	⅜	111,000	2⅛	1⅞	2⅛	Cities Service	37,804,394	N.P.	....	6-1-32	....	4¼	1¼	6¼	1½
1¼	⅝	1,800	1	1/16	1/16	Colon Oil	2,200,000	N.P.	....	.....	....	3¼	½	4	¼
⅞	⅜	200	⅜	⅜	⅜	Cosden Oil	399,687	$1	....	.....	....	3⅞	½	3⅞	1⅜
18⅞	10	11,200	17½	16¾	16¾	Creole Petroleum	6,974,356	$5	....	.....	....	14⅜	9⅝	12	4¾
6⅝	4¼	No sales ..	..	..	..	Darby Petroleum	509,696	$5	25c	7-15-35	.50	7½	4⅛	8	2⅛
2	⅜	300	1⅜	1¼	1¼	Derby Oil & Refining	263,162	N.P.	....	.....	....	2¼	1	2⅜	⅞
38	34	150	34	33¼	33¼	Eureka Pipe Line	50,000	$50	$1Q	8-1-35	4.00	37	30	41¾	20
74⅜	50¼	5,400	66	61¼	63	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	....	76¾	49¾	62	24
64	44	4,800	61½	58	58⅞	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	7-1-35	§1.25	49½	33¼	105½	40
22½	15⅜	7,800	19⅜	19⅛	19⅜	Imperial Oil of Canada	26,919,871	N.P.	25c8A†‡	6-1-35	.92½	17⅞	12⅝	15⅞	6½
6	3⅝	100	5¼	5¼	5¼	Indiana Pipe Line	300,000	$10	15c8A	5-15-35	.35	6⅞	3⅝	8	3⅛
39¾	28	11,300	35¼	33⅝	33⅝	International Petroleum	14,247,088	N.P.	75c8A†‡	6-1-35	2.28	33⅜	19⅝	23½	8⅞
9½	4⅜	22,900	8⅛	7⅝	8⅛	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	....	5	2⅛	2¼	7/16
6¾	3½	100	4¼	4¼	4¼	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	6	3⅜	9½	1¼
8¼	4½	6,300	8¼	7⅜	8⅛	Lone Star Gas	5,382,723	N.P.	15c	8-15-35	‖ .16	8⅜	4¼	11⅞	4⅜
5½	4⅛	1,600	5⅜	5⅛	5¼	Mountain Producers	1,682,182	$10	15cQ	7-1-35	.60	5½	4	6½	2½
18¾	11¾	2,500	18⅜	17¾	17¾	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-35	1.00	18⅛	13⅛	20	10
10½	6¾	1,400	10¼	9⅞	10⅛	National Transit	509,000	$12.50	40c8A	6-15-35	.75	9½	7	10	5½
2⅝	2	100	2½	2½	2½	New Bradford Oil	1,445,202	$5	10c8A	9-16-35	.20	2½	1¾	2⅛	½
2⅛	1	100	1¾	1¾	1¾	New Mexico and Arizona	1,000,000	$1	....	.....	....	2¾	1	1⅞	½
4	3	100	4	4	4	New York Transit	100,000	$5	15c8A	4-15-35	.30	4¾	3	4⅞	3
7	5¼	200	6½	6	6	Northern Pipe Line	120,000	$10	25c8A	7-1-35	.50	7	4⅝	6⅛	4¼
2¼	1¼	12,000	2	1⅞	2	Pantepec Oil	1,608,700	N.P.	....	.....	....	2⅝	⅞	3¾	½
1½	⅝	100	1⅛	1⅛	1⅛	Ryan Consolidated	296,931	N.P.	....	.....	....	3⅜	⅞	4¼	⅝
7½	5½	1,700	7¼	7	7⅛	Salt Creek Producers	1,496,859	$10	20cQ	8-1-35	.80	7⅞	5½	9¼	3½
28⅞	21⅞	1,300	24⅝	23⅜	23⅝	South Penn Oil	1,200,000	$25	30cQ	6-29-35	1.20	26½	17½	22⅛	11
4¾	3⅞	100	4¼	4¼	4¼	Southern Pipe Line	100,000	$10	15c8A	9-3-35	.25	5½	3½	6	2⅛
52½	45¼	100	49	49	49	Southwest Penna. Pipe Lines	35,000	$50	$1Q	7-1-35	5.00	47	41	43	24½
21⅝	18	6,300	21¼	20½	21¼	Standard Oil of Kentucky	2,604,790	$10	25cQ†	3-15-35	1.50	18⅜	14⅝	19¼	8⅝
12	7¾	600	11	10¼	11	Standard Oil of Nebraska	188,403	$25	....	6-20-34	.50	16⅞	8¼	20½	11
19¾	11½	1,300	15½	14½	15¼	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	28½	12¼	41	15½
1¼	⅞	4,600	1¼	1⅛	1⅛	Sunray Oil	1,610,810	$1	....	4-15-31	....	2	1/16	1½	¼
6¾	5	200	5⅝	5⅝	5⅝	Texon Oil & Land	336,028	N.P.	15cQ	6-29-35	.90	11	4⅝	13¾	6¼

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Includes 50 cents on old $25 par value stock. ‖Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

PRICES ON REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of August 13, 1935

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
Below 63 octane	.04¾	.04⅞
63-70 octane	.05⅝	.05¾
60-62 400 grade:		
Below 63 octane	.04¾	.04⅞
63-70 octane	.05⅝	.05¾
64-66 375	.04¾	.05
68-70 360	.05	.05⅛

NORTH TEXAS—

U. S. Motor grades:		
Below 63 octane	.04¾	.04⅞
63-70 octane	.05⅝	.05¾
60-62 400	.04¾	.04⅞
64-66 375	.04⅞	.05

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:	
Below 63 octane	.05⅛
63-70 octane	.06¼
60-62 400	.05⅛

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:	
Below 63 octane	.05⅛
63-70 octane	.06¼

CHICAGO (based on Group 3)—

U. S. Motor grades:		
Below 63 octane	.04¾	.04⅞
63-70 octane	.05½	.05⅝
60-62 400	.04⅝	.04⅞
64-66 375	.04⅞	.05
68-70 360	.05	.05⅛
Aviation fighting grade	.05⅝	.06

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:	
Below 60 octane	.05⅝
60-64.9	.06⅝
65-70 octane	.06⅞
64-66 375	.06
68-70 350	.06⅛

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.04½	.05¼
58-60 400	.05	.06

EAST COAST—

U. S. Motor, below 60 octane:	
*New York (Bayonne)	.05⅝
Baltimore	.05⅝
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.06
Philadelphia	.06
Boston	.06
Baltimore	.06
Charleston, S. C.	.06
U. S. Motor, 65 and above:	
*New York (Bayonne)	.06¼
Philadelphia	.06¼
Boston	.06½
Baltimore	.06½
Charleston, S. C.	.06¼

*All grades of gasoline one-fourth cent less for small barge shipments.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05	.05¼
60-64.9	.05¼	.05½
65 octane and higher		.05½

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05½
52-54 450 (blending)	.05½
54-56 450 (blending)	.05⅝

CHICAGO (based on Group 3)—

50-52 450 (blending)	.04¾	.05
Cleaners' naphtha, 56-58 gr., 200 l.b.p., 320 e.p.	.06⅞	.07
Lacquer diluent, 180 l.b.p., 250 e.p.	.07⅞	.08
Lacquer diluent, 140 l.b.p., 200 e.p.	.08⅞	.09
Rubber solvent, 68-70 gr., 160 l.b.p., 300 e.p.	.06⅞	.07
Stoddard solvent, 300 l.b.p., 410 e.p., over 33° flash	.06⅝	.06½
Pet. thinner, 290-300 l.b.p., 410 e.p., over 33° flash	.06⅝	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 l.b.p., 330 e.p.	.06⅝	.07
Petroleum spirits	.05⅞	.06

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.03½
Grade 18-55	.04¼	.04½
Low vapor pressure grade:		
14 lb. v.p. (max.)	.04⅝	.04⅞
12 lb. v.p. (max.)	.05	.05¼

NORTH LOUISANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.03⅝

NORTH TEXAS—

Grade 26-70		.03⅝
Grade 18-55	.04⅛	.04¼
Low vapor pressure grade:		
14 lb. v.p. (max.)	.04⅝	.04⅞
12 lb. v.p. (max.)	.05	.05⅛

CALIFORNIA—

75-85 375-390	.04⅝	.05½

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅝	.03¾
42-44	.03½	.03⅝

NORTH TEXAS—

41-43	.03¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.03⅝

PENNSYLVANIA (inland refineries)—

45	.04½
46	.04⅝
47	.04⅝

CHICAGO (based on Group 3)—

41-43	.03⅝	.03⅝
42-44	.03½	.03⅝

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03¼	.03½

NEW YORK (Bayonne, N. J.)—

41-43	.04⅞	.05

GULF COAST (domestic)—

41-43	.04¼	.04½

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area. Refineries absorb freight to 80 cents a ton.)

Pile run	6.00
Direct from still	7.00
Egg, nut, pea	8.00
Lump	8.50

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03	.03⅛
No. 2 straw, 32-36	.02⅝	.03
No. 2 dark, 32-36	.02⅝	.02⅞
No. 3, 28-32	.02½	.02⅝
No. 3, 15 and above, 28-32	.02⅝	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅛	.03⅜
No. 1 straw, 38-40	.03	.03⅛

NORTH LOUISIANA (Ark. N. La. and Miss. delivery)—

No. 2, 32-36	.03⅛	.03¼

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03½
No. 3, 28-32		.03¼

CHICAGO (based on Group 3)—

No. 1 prime white, 38-40	.03	.03⅛
No. 1 straw, 38-40	.02¾	.03
No. 2 straw, 32-36	.02⅜	.02⅞
No. 2 dark, 32-36	.02⅝	.02¾
No. 3, zero to 15, 28-32	.02½	.02⅝
No. 3, 15 and above, 28-32	.02¼	.02½

NEW YORK (Bayonne, N. J.)—

No. 1	.04⅞	.05
No. 2	.03⅞	.04
No. 4	.03½	.03⅝

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4, 24-28	.87½	.90
No. 4, 15 and above, 24-28	.75	.80
No. 5	.70	.75
No. 6	.67½	.70
Below 18 fuel oil, industrial	.65	.67½

NORTH TEXAS—

U.G.I. gas oil	.02½	.02⅝
No. 4, 24-28	.87½	.90
No. 5	.72½	.75
No. 6	.67½	.70
Below 18 fuel oil, industrial	.65	.67½

NORTH LOUISIANA (Ark. N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.02¾
10-14 fuel oil, industrial	.75	.80

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (based on Group 3)—

U.G.I. gas oil	.02⅜	.02½
No. 4, 24-28	.85	.90
No. 4, 15 and above, 24-28	.72½	.77½
No. 5, 18-32	.65	.70
No. 6, 10-16	.55	.60

Fuel oils of more than 40 cold test generally 5 to 15 cents per bbl. in these areas.

PENNSYLVANIA (inland refineries)

36-40	.04½	.04⅝

CALIFORNIA—

Los Angeles:

30-34 gas oil, per bbl.	1.05	1.25
27 plus Diesel	1.05	1.25
27 plus Diesel (bunkers)	1.25	1.30
12-16 (bunkers at tidewater)	.87	.95
10-16 (cargo lots)	.75	.92
12-17 (tank cars)	.60	.95
San Joaquin Valley:		
10-18 (tank cars)	.55	.75
San Francisco:		
27 plus Diesel, per bbl.		1.25
27 plus Diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03½	.03⅝
28-30 Diesel (bunkers)		1.70
Bunker C (bulk cargoes)	.85	.90
Bunker C (bunkers)	.95	1.00

NEW YORK ((Bayonne, N. J.)—

27 plus, gas oil		.04
28-30 Diesel (lighterage 6½ cents per bbl.)		1.65
28-30 Diesel (tank cars)		.04
*Bunker C (to ocean-going ships in N. Y. harbor)		1.05
Industrial fuel (tank cars)		.03⅝

*Lighterage charge 5 cents per barrel additional.

Neutral Oil

(Via. at 100° F. except Pennsylvania and color N.P.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.10
180-3		.11¼
180-4		.10⅝
200-3		.11⅜
200-4		.11½
240-2		.13⅜
240-4		.13½
280-3		.14⅜
280-4		.14
300-3½		.15¼
400-4		.17¼
100-2 paraffin oil		.05⅝
15-20 Cold Test:		
200-3		.10⅜
200-4		.10¼
240-3		.12⅜
240-4		.12¼
280-3		.13⅜
280-4		.13

GULF COAST—

Pale Oils:		
200-3	.07	.07½
300-3	.07½	.08
500-3½	.08½	.09
750-3½	.09	.09¼
1,200-3½	.09½	.09⅝
2,000-4	.09¾	.10
Red Oils:		
200-5-6	.07	.07¼
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08½	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.07½	.07¾
200-2½-3	.08	.08¾
300-3-3½	.09	.10
350-3-4	.10½	.11
400-3-4	.12	.12½
450-3-4	.12½	.12¾
550-3-4	.13	.13½
600-3-4	.13½	.14
Red Oils:		
200-4-5	.08½	.09
300-5-6		.09
350-5-6	.10	.10¼
400-5-6	.10½	.10⅝
450-5-6	.11	.11¼
500-5-6	.11½	.11⅝
600-5-6½	.12	.12⅜
700-6½ plus	.13	.13¼
750-6½ plus	.13½	.13⅝
900-6½ plus	.14	.14½

PENNSYLVANIA—

150 vis. at 70° F., color, 400-405 flash:		
Zero pour test	.20½	.21
10 pour test	.19½	.20
15 pour test	.19	.19½
25 pour test	.18	.18½
180 vis., at 70° F., 3 color:		
25 pour test	.21	.21½
200 vis. at 70° F., 3 color:		
Zero pour test	.25½	.26
10 pour test	.24½	.25
15 pour test	.24	.24½
25 pour test	.23	.23½

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D		.18
180-160 D, 0-10		.15
150-160 D, 10-25		.14½
150-160 25-40		.14
150-160 E		.14
Steam refined:		
630 green (treated)		.09½
600 light green, untreated		.08½
600 dark green, untreated	.05	.06

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 510; 540-550 flash):		
10 pour test	.20	.20½
15 pour test	.19	.19½
20 pour test	.18	.18½
25 pour test	.17	.17½
Steam refined:		
600	.09½	.10
650	.11	.11½
600 Pennsylvania flash	.12	.12½
630 flash	.17	.17½
600 Warren E filtered	.13	.13½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02	.02½

PENNSYLVANIA (inland refineries)

122-124 (a.m.p.) w.c. scale	.0195	.02
124-126 (a.m.p.) w.c. scale	.0195	.02

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0420
125-127 (a.m.p.) wax		.0430
128-130 (a.m.p.) wax		.0455
130-132 (a.m.p.) wax		.0470
133-135 (a.m.p.) wax		.0530
135-137 (a.m.p.) wax		.0555
124-126 (a.m.p.) w.s.	.0200	.0210
24-26 (a.m.p.) y.s.	.0200	.0205
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅜	.03
Extra amber	.03	.03½
Lily white	.06⅝	.06⅝
Snow white	.07⅜	.07⅝
Cream	.05⅝	.05⅝

CHICAGO (f.o.b. switching district; carload lots in bags, add 3¢ for a.m.p.)

122-124 (a.s.t.m.) wax	.0440	.0450
125-127 (a.s.t.m.) wax	.0465	.0475
127-129 (a.s.t.m.) wax	.0480	.0490
*130-132 (a.s.t.m.) wax	.0520	.0530
*132-134 (a.s.t.m.) wax	.0545	.0555

*Prices applicable for wax shipped in bulk or bag.

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.04⅞
60-62 400	.04⅞	.05
61-63 390	.04⅜	.05
64-66 375	.05⅛	.05¼

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04
55-65 octane	.04	.04¼
65-67 octane	.04¼	.04½
67-69 octane	.04½	.04¾
Above 69 octane	.04¾	.05
58-60 400 endpoint	.04½	.05

KEROSENE

GULF COAST—

41-43 prime white		.03⅝
41-43 water white	.03⅜	.04
44 water white		.04¼

LOS ANGELES—

41-43 water white	.04¼	.04⅜

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E		.20
600 S.R. unfiltered	.16½	.17
650 S.R. unfiltered		.18
600 flash S.R.	.19	.19½
630 flash S.R.	.24	.24½
Bright Stocks:		
8 color		.24
6½ plus colors in dilution		.23

NEUTRAL OIL

200-3 color	.28	.30
150-3 color	.23	.25

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.03625
125-127 a.m.p.		.0375
128-130 a.m.p.		.0400
130-132 a.m.p.		.0425
133-135 a.m.p.		.0475
135-137 a.m.p.		.05
Crude scale:		
124-126 w.s.	.0200	.0205
124-126 y.s.	.019	.02

RETAIL OIL MARKETS

Tank wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of August 13, 1935

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Chicago	15.5	17.5	4.0	9.8
Decatur, Ill.	15.5	16.5	4.0	9.8
E. St. Louis	15.2	17.2	4.0	9.5
Joliet	15.5	17.5	4.0	9.8
Peoria	15.5	15.5	4.0	9.8
Quincy	15.3	17.3	4.0	9.6
Davenport, Ia.	15.5	(†)	4.0	9.8
Des Moines	15.3	(†)	4.0	9.6
Mason City	15.7	(†)	4.0	10.0
Sioux City	15.5	(†)	4.0	9.8
Duluth, Minn.	16.3	18.3	4.0	10.6
Mankato	15.9	15.9	4.0	10.2
Minneapolis	15.9	15.9	4.0	10.2
LaCrosse, Wis.	16.9	18.9	5.0	10.2
Green Bay	17.2	19.2	5.0	10.5
Milwaukee	15.3	16.8	5.0	10.1
Madison	16.9	18.9	5.0	10.2
Detroit, Mich.	15.2	16.7	4.0	9.3
Grand Rapids	16.6	18.6	4.0	10.5
Saginaw	16.8	18.8	4.0	9.3
Evansville, Ind.	17.2	19.2	5.0	10.3
Indianapolis	17.4	19.4	5.0	10.5
South Bend	17.6	19.6	5.0	12.0
Fargo, N. Dak.	16.9	18.9	4.0	11.2
Huron, S. Dak.	17.4	19.4	5.0	10.7
Sioux Falls	16.9	18.9	5.0	10.2
Kan. City, Mo.*	14.9	16.9	4.0	9.2
Springfield	14.6	16.6	4.0	8.9
St. Louis	15.2	17.2	3.5	9.5
St. Joseph	14.9	16.9	4.0	9.2
Wichita, Kans.	14.4	15.0	4.0	8.3
Bartlesville, Ok.	16.0	18.0	5.0	8.8

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers: Undivided accounts, 1⅛ cents on premium and regular and 2½ cents on third grade off service station prices; divided accounts one-half cent less than undivided. Discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Where prices are more than 1 cent below normal, the discounts are one-half cent less than above.

Stanolex Furnace Oil in Chicago

Effective June 27, 1935, f.o.b. Chicago tank wagon prices: Range oil, less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons and more, 7.0 cents. No. 1 (34-40 it. stw. zero), less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons or more, 7.0 cents; No. 2 (30-34, stw. zero), same prices and quantities as No. 1; No. 3 (22-26, zero), less than 150 gallons, 7.2 cents; 150 gallons or more, 6.2 cents. No. 4 (12-16 zero), less than 400 gallons, 7.2 cents; 400 gallons or more, 6.2 cents, viscosity of No. 4, 85 and 100° F.; No. 5, less than 400 gallons, 5⅝ cents; 400 gallons or more 4⅝ cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Denver, Colo.	18.0	20.0	5.0	11.0
Pueblo	18.0	20.0	5.0	13.0
Grand Junction	20.5	22.5	5.0	15.0
Casper, Wyo.	18.5	20.5	5.0	11.5
Cheyenne	18.5	20.5	5.0	13.0
Butte, Mont.	21.0	23.0	5.0	17.5
Billings	18.5	20.5	4.0	16.5
Helena	21.0	23.0	5.0	17.5
Great Falls	20.5	22.5	5.0	17.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23.0	25.0	5.0	18.0
Boise	22.5	24.5	4.5	18.0
Albu'que, N. M.	20.0	22.0	*5.5	13.0

*One-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 2½ cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Atlanta, Ga.	19.0	21.0	7.0	12.0
Augusta	19.0	20.0	7.0	13.0
Macon	19.5	21.0	7.0	13.0
Savannah	18.5	20.5	7.0	14.0
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	20.0	22.0	8.0	11.0
Montgomery	22.0	24.0	8.0	13.5
Jackson, Miss.	19.0	21.0	7.0	11.0
Vicksburg	18.5	20.0	7.0	12.0
Jacksonville, Fla.	18.5	20.5	8.0	11.5
Miami	18.5	20.5	8.0	13.5
Pensacola	18.5	20.5	8.0	11.5
Tampa	18.5	20.5	8.0	12.5
Lexington, Ky.	19.5	21.5	6.0	10.0
Covington,	18.0	20.0	6.0	11.5
Louisville	18.5	20.5	6.0	10.0
Paducah	18.5	20.5	6.0	10.0

In addition to the state tax of 6 cents Montgomery, Ala., has a county tax of 1 cent per gallon and a city tax of 1 cent per gallon on gasoline, and one-half cent per gallon on kerosene. Mobile and Birmingham, Ala., each have a city gasoline tax of 1 cent per gallon. Pensacola, Ala., has a city gasoline tax of 1 cent.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Dallas, Tex.	15.0	17.0	5.0	7.0
Fort Worth	15.0	17.0	5.0	7.0
Houston	15.0	17.0	5.0	8.0
San Antonio	16.0	18.0	5.0	8.0
El Paso	17.0	19.0	5.0	10.0
Muskogee, Ok.	16.0	18.0	5.0	8.0
Okla. City	16.0	18.0	5.0	8.0
Tulsa	16.0	18.0	5.0	8.0
Ft. Smith, Ark.	14.5	18.0	5.0	8.0
Little Rock	17.0	20.5	7.5	9.5
Texarkana	15.5	17.5	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Atl'tic City, N. J.	13.5	17.0	4.0	9.0
Newark	13.5	17.0	4.0	7.5
Annapolis, Md.	14.5	18.3	5.0	10.0
Baltimore	14.3	17.8	5.0	8.5
Cumberland	15.8	19.3	5.0	12.7
Wash'g'n, D. C.	12.3	15.8	3.0	9.5
Danville, Va.	16.6	20.1	6.0	12.9
Norfolk	15.1	18.6	6.0	11.3
Petersburg	15.8	19.3	6.0	11.7
Richmond	15.8	19.3	6.0	11.7
Roanoke	16.3	20.3	6.0	12.9
Charles'n, W. Va.	15.0	18.5	5.0	12.6
Parkersburg	14.3	17.8	5.0	11.2
Wheeling	15.5	19.0	5.0	12.2
Charlotte, N. C.	18.4	21.9	7.0	13.5
Hickory	18.7	22.2	7.0	13.7
Mt. Airy	18.7	22.2	7.0	13.8
Raleigh	18.2	21.7	7.0	13.3
Salisbury	18.5	22.0	7.0	13.6
Charleston, S. C.	16.2	19.7	7.0	11.2
Columbia	18.0	21.5	7.0	13.2
Spartanburg	18.4	21.9	7.0	13.5

Tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Omaha	17.9	19.9	6.0	10.1
McCook	18.6	20.6	6.0	10.8
Norfolk	18.3	20.3	6.0	10.5
North Platte	18.7	20.7	6.0	10.9
Scottsbluff	19.4	21.4	6.0	11.6

Note: Discounts to dealers; where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 2⅛ cents; Red Crown Ethyl, 2½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank wagon deliveries covered only by Standard Commercial Consumers Contract, effective January 1, 1935.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Ohio points	17.0	19.0	5.0	*12.5

*Includes state tax of 1 cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
San Francisco	16.5	18.5	4.0	11.5
Los Angeles	11.5	13.5	4.0	10.5
Fresno, Calif.	15.0	17.0	4.0	12.0
Phoenix, Ariz.	17.0	19.0	6.0	‡18.0
Reno, Nev.	19.0	21.0	5.0	13.0
Portland, Ore.	19.0	21.0	6.0	13.5
Seattle, Wash.	19.0	21.0	6.0	13.5
Tacoma	19.0	21.0	6.0	13.5
Spokane	22.0	24.0	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where discount is 1 cent.

‡Includes 5-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Philadelphia, Pa.	15.0	17.0	4.0	9.0
Pittsburgh	16.0	18.0	4.0	10.0
Allentown	15.5	17.5	4.0	9.0
Erie	15.0	17.0	4.0	9.0
Scranton	16.0	18.0	4.0	10.0
Altoona	16.0	18.0	4.0	10.0
Dover, Del.	15.5	17.5	4.0	10.0
Wilmington	15.5	17.5	4.0	10.0
Springf'd, Mass.	13.2	16.7	4.0	7.5
Worcester	13.3	14.8	4.0	7.5
Hartford, Conn.	12.3	15.8	3.0	7.0
New Haven	13.2	15.7	3.0	7.5
Providence, R. I.	12.0	13.5	3.0	7.0

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
N. Orleans, La.	17.5	21.0	18.0	†13.5
Baton Rouge	16.5	20.0	†7.0	11.5
Alexandria	17.5	21.0	†*8.0	10.5
Lafayette	18.0	21.5	‡*8.0	12.5
Lake Charles	18.0	21.5	†*8.0	12.5
Shreveport	16.0	19.5	†7.0	9.0
Knoxville, Tenn.	20.0	23.5	8.0	14.0
Memphis	18.0	21.5	8.0	11.0
Chattanooga	19.5	23.0	8.0	11.5
Nashville	19.0	22.5	8.0	12.0
Bristol	17.85	20.6	8.0	14.5

*Includes city tax of 1 cent.

‡Includes 2-cent parish tax. †Includes 1-cent parish tax.

Tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM CO., INC.

	Gasoline			Kero.
	Post deal	Serv. sta.	Inc. tax	tank wag.
Albany, N. Y.	14.2	17.7	5.0	7.5
*Met. New York	15.05	19.3	5.0	7.25
*Br'kl'n, Queens	14.8	18.8	5.0	7.25
Buffalo	13.5	16.0	5.0	8.0
Rochester	14.75	18.0	5.0	8.5
Syracuse	14.5	18.0	5.0	8.5
Boston, Mass.	13.0	16.5	4.0	7.0
Portland, Me.	15.0	18.5	5.0	7.5
Manch'ter, N. H.	14.8	18.3	5.0	7.75
Burlington, Vt.	16.2	19.7	5.0	8.5

*Includes 2 per cent city sales tax.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Hamilton, Ont.	22.0	26.0	6.0	17.5
Toronto, Ont.	22.0	26.0	6.0	17.5
Brandon, Man.	30.3	33.3	7.0	21.8
Winnipeg, Man.	28.7	31.7	7.0	20.2
Regina, Sask.	30.0	33.0	7.0	21.5
Saskatoon, Sask.	32.8	35.8	7.0	24.3
Edmonton, Alta.	32.2	35.2	7.0	23.7
Calgary, Alta.	29.5	32.5	7.0	21.0
Vancouver, B. C.	27.0	30.0	7.0	24.0
Montreal, Que.	20.5	23.0	6.0	17.5
St. John, N. B.	26.0	30.0	8.0	19.5
Halifax, N. S.	26.0	30.0	8.0	19.5

*Imperial gallon used in Canada.

In maritime provinces all dealers get 4 cents off service station price. In all other provinces open dealers get 3 cents off service station price and 1 cent additional to 100 per cent accounts, except Montreal City where open dealers get 2½ cents off service station price with 1 cent additional to 100 per cent accounts.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Retail Price Changes

Standard Oil Co. of New Jersey, August 5 advanced tank wagon gasoline .9 cent and station gasoline 1.4 cents in Charlotte; advanced tank wagon gasoline 1.2 cents and station gasoline 2.2 cents, in Mt. Airy; advanced tank wagon gasoline 1 cent and station gasoline 2 cents, in Salisbury; advanced tank wagon gasoline 1.65 cents and station gasoline 2.9 cents in Spartanburg. August 8 reduced tank wagon and station gasoline .2 cent in Newark, and advanced tank wagon and station gasoline .5 cent in Atlantic City.

Standard Oil Co. of California August 7 reduced tank wagon and station gasoline 3 cents in Phoenix.

Magnolia Petroleum Co. August 8 advanced tank wagon and station gasoline 2 cents in El Paso.

Gas Franchise Granted

SARNIA, Ontario, Aug. 10.—The Sarnia County council, at a special session last week, granted the Union Gas Co. the right to lay a pipe line across county roads, in connection with the construction of the new 10-inch transmission line from the Dawn Field to London.

It is expected that ultimately the line with laterals will serve a number of communities, including Glencoe, Strathroy, Newbury, Mount Brydges, Delaware, Wardsville and Bothwell.

L. C. Overmiller, Tulsa, in charge of construction work, and Luther Talbert, district superintendent, Lone Star Gas Co., Dallas

Chicago Markets

CHICAGO, Aug. 12.—Reviving strength with talk of higher prices for gasoline, and much better feeling in kerosene and light heating oils, have featured the tank car markets here in the last few days. In the background is the fact that a record-breaking volume of business in motor fuel is being done.

The turn in kerosene is one of the interesting situations. The trade is beginning to want kerosene now, and to want it in a hurry. This strongly contrasts with the attitude a few weeks ago, and is partly due to the cleaning up soft spots through the medium of purchases for coastwise or export movement.

Something of the same market psychology applies to the better grades of furnace oils. These products probably will be over-sold and extremely low prices heard late in July have now become things of the past.

The industrial fuel oils and gas oils are quiet but quite steady and in good tone.

Lubricating oil business has been somewhat uneven and spotty but in general the tone seems fairly good.

Wax business is slow. Leading sellers recently made a change in quoting 130-132 and 132-134 grades to make prices applicable to either bulk or bag.

Petroleum coke is holding its own.

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

Corsicana (heavy) (June 17, 1933)	.80
East Texas	$1.00
Other fields	(See gravity table)

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933).	$ .70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933)	.75
Pecos County, Yates shallow Pool (Sept. 29, 1933)*	.65
Jones and Fisher Counties*	(See gravity table)

South Central and Southwest Texas

(See note below table)

Darst Creek	$ .87
Mirando (June 29, 1935)	.75
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (Sept. 29, 1933)	.80
Saxet (June 29, 1935)	.80

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$ .70
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Rocky Mountain States

Ilea, light (Sept. 29, 1933)	$ .96
Ilea, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	$1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 29, 1933)	(See Stanolind Mid-Continent price schedule)
Grass Creek, light (Sept. 29, 1933)	$1.18
Grass Creek, heavy (Sept. 29, 1933)	.62
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Lance Creek (Dec. 16, 1932)	.92
Hudson (June 2, 1931)	.85
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome, all grades (Feb. 16, 1935)	.57
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera (Sept. 29, 1933)	1.25
Sunburst (July 19, 1935)	1.20
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)	.75

Gulf Coast

Grade A and Grade B specification discontinued by leading buyers. (See gravity table)

Hardin (Aug. 8, 1935)	$.93
Tomball (see note)*	1.10
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11, 1934)	1.00
Greta (Sept. 29, 1933)	.85
Refugio, light	(See gravity table)
Refugio, heavy (June 29, 1935)‡	.80
Markham and High Island	(See Gulf Coast gravity table)
Conroe	(See Conroe gravity table)
Bosco, La. (Jan. 18, 1935)‡	$ .90

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2 by Magnolia Petroleum Co., and November 10 by Stanolind Crude Oil Purchasing Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy by Humble Oil & Refining Co., Cleveland and Hardin posted by Magnolia Petroleum Co. ‡Bosco posted by Pure Oil Co.

Middle Western States

OHIO OIL CO

Lima (Feb. 1, 1935)	$1.15
Illinois (Jan. 5, 1934)	1.12
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Midland, Mich. (Sept. 30, 1933)*	$1.62
West Branch, Mich.	.86
Oceana, Mich (Oct. 5, 1933)	.90
Somerset, Ky. (May 30, 1935)	1.13
Western Kentucky (May 22, 1935)	1.13

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co. Ashland, Ky., and posted prices includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective July 16, 1935)

Bradford, Pa.	$1.95
Allegany, N. Y.	1.95

SOUTH PENN OIL CO.
(Effective July 16, 1935)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$1.93
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.87
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.62
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.62
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.33

PENNZOIL CO.
(Effective July 16, 1935)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$1.92
Group B (Includes Titusville district.)	1.91
Group C (Includes Turkey and Tidioute districts.)	1.90
Group D (Includes Bear Creek and Porkey districts.)	1.89
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	1.86

PURE OIL CO
(Effective July 16, 1935)

Cabin Creek, W. Va.	$1.63
Bradford Hollow, W. Va.	1.62
Kelly Creek, W. Va.	1.62

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.80

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$.955

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

Crude Oil Gravity Prices

Gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas and Louisiana	9 Gulf Coast, Texas and Louisiana	10 Cotton Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$.82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above these quoted take highest price offered in that field.)

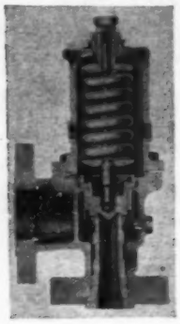
(Effective September 6, 1933)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote	Mountain View	Elwood Terrace	Newhall, McKittrick, Kern River	Wheeler Ridge	Kettleman Hills	Shiells Canyon, South Mountain, Santa Paula
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65	$.57	....	$.57	$.57	....	$.57
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65	.57	....	.57	.57	....	.57
16-16.9	.66	.65	.72	.73	.69	.73	....	.69	.67	.68	.65	....	.65	....	....	....	.65	.57	....	.57	.57	....	.57
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68	.57	....	.57	.57	....	.57
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.69	.71	.57	....	.57	.58	....	.60
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74	.57	....	.57	.61	....	.63
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78	.58	....	.57	.64	....	.66
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81	.59	....	....	.67	....	.69
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84	.61	....	....	.70	....	.72
23-23.9	.88	.81	.92	.97	.94	.96	$.83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87	.63	....	....	.73	....	.75
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90	.66	....	....	.76	....	.78
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93	.69	....	....	.79	....	.81
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96	.72	....	....	....	....	.84
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99	.75	....	....	....	....	.88
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02	.78	....	....	....	....	.92
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06	.81	....	....	....	....	.96
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09	.84	....	....	....	....	1.00
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12	.87	....	....	....	....	....
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.16	1.13	....	....	1.15	.90	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18	.93	1.03	....	....	.93	....
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21	....	1.06	....	....	.96	....
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....	....	1.09	....	....	.99	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....	....	1.12	....	....	1.02	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....	1.15	....	....	....	1.05	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....	....	....	....	....	1.08	....
39 and over	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.11	....

NEW OR IMPROVED EQUIPMENT

Oil Relief Valve Designed to Meet Various Conditions

Consolidated Safety Valve division of the Consolidated Ashcroft Hancock Co., Inc., Bridgeport, Conn., has developed an oil relief valve made in two general types, one with a top-inserted seat bushing and the other with a reinforced antidistortion bushing inserted through the inlet flange.



The top-inserted bushing is used in a cast-iron valve, type 1,602, which has a maximum range of 400 pounds at atmospheric temperatures, and 250 pounds at 400° F. maximum. The same design in cast-steel is made in ranges up to a maximum of 500 pounds at 650° F., or 400 pounds at 800° F.

The second type with the reinforced through bushing is type 1,620. In the 1½-inch size this valve has a maximum range of 1,000 pounds at 900° F., and in the 2½-inch and 3-inch sizes it has a maximum range of 800 pounds at 900° F. All of these valves are top-guided and have inverted bevel seats so designed that the oil is not pocketed in the pressure chamber after the valve opens.

These valves are designed for service on gas, oil, vapor or other fluids and the exact service conditions should be explained so that proper materials may be used. Further information may be obtained from any of the branch offices of the Consolidated Ashcroft Hancock Co., Inc., in Chicago, Kansas City, Dallas, Tulsa, or Los Angeles.

Bulletins, Booklets and Other Literature for the Trade

A booklet, "The Facts About Welded Piping for Buildings," announced by Air Reduction Sales Co., Lincoln Building, New York, is designed to show advantages of the Arcowelding process.

"The Use of Lead in the Oil Industry" is among the useful articles appearing in the current Dutch Boy Quarterly, published by the National Lead Co., 11 Broadway, New York.

Templeton, Kenly & Co., 1020 South Central Avenue, Chicago, have prepared an illustrated bulletin on Simplex adjustable tank supporting jacks, which have wide use in the oil field.

Nickel cast irons in gas and liquid handling equipment are treated in the current issue of Nickel Cast Iron News, published by International Nickel Co., Inc., 67 Wall Street, New York.

Taylor "Dubl-Response" control systems for temperature, pressure, flow and liquid level are the subject of a 36-page booklet obtainable from Taylor Instrument Companies, Rochester, N. Y.

The "Little Landis," a pipe threading and cutting machine for maintenance shops, is described in a folder sent on request by Landis Machine Co., Waynesboro, Pa. Operators of oil field machine shops will find of interest also the company's bulletin, "Let's Talk About Performance," giving facts concerning thread-cutting equipment.

Ninety-six illustrations of Fairbanks valves, besides pictures of Dart unions and descriptions of both, are presented in a 56-page catalog by Fairbanks Co., New York, Boston and Pittsburgh, Pa.

More than 1,000 employes of the Axelson Manufacturing Co. and members of their families attended an outing in the American Legion Stadium at Montebello, Calif., resuming the annual picnics which were suspended five years ago.

An unusually comprehensive catalog of power transmission equipment, conveniently indexed and containing 144 pages profusely illustrated, may be obtained by sending a request to the Medart Co., 3500 DeKalb Street, St. Louis, Mo.

A new industrial thermometer catalog issued by the C. J. Tagliabue Manufacturing Co., Brooklyn, N. Y., contains the complete Tag line of industrial thermometers, miscellaneous metal and woodback thermometers, hygrometers, U gauges, mercurial vacuum gauges and mercurial barometers.

Thiokol Corp., Yardville (Trenton), N. J., is sending on request a folder describing "Thiokol D," announced as an oil-proof synthetic rubber, unaffected by the action of gasoline and other solvents, even after long periods of exposure.

The Laboratory Gas Testing Apparatus bulletin AG-2, announced by American Meter Co., 60 East Forty-second Street, New York, completes a series of six such bulletins, now available in standard size for preservation in the company's binder.

Men Widely Known in the Equipment Field

CHARLES A. McCOLLUM

Mr. McCollum, formerly resident manager of the Houston district sales office of the National Supply Co., has been made sales manager of the National Supply Co., with headquarters in Tulsa.

Replaceable Cutter Asemblies Feature of Rock Core Bit

To provide a positive means of obtaining cores in all hard formations and in formations that are broken or consist of alternating strata, Globe Oil Tools Co., Los Nietos, Calif., has developed a new roller bearing rock core bit designated type KR. Greatest economy is gained by replaceable cutter assemblies while increased recovery is accomplished by use of two core catchers.

The cutter assemblies consist of a full set of two inner and four outer roller bearing cutters machined from special alloy steel and hardened to attain toughness and maximum wearing qualtities. They are mounted on a core head made from heat-treated steel with strength and hardness that provide for repeated reruns. No welding of the head is necessary after the heat-treatment, and this eliminates the application of excessive heat which might counteract the beneficial effects of heat-treating. Since the cutter assemblies are replaceable throughout, the same body can be used for run after run.

The two core catchers consist of (1) a slip type catcher which is capable of pulling the hardest core; and (2) a dog or mouse-trap type which provides an effective grip on cores from any formation and which is said to be particularly effective in holding broken or soft cores.

Cast-Iron Pipe Is Developed for Certain Conditions of Use

A new "Hi-Test" cast-iron pipe, developed for water and gas lines where different service conditions preclude the satisfactory use of steel or wrought iron, has been announced by the Walworth Co., 60 East Forty-second Street, New York. The new pipe is suitable for water working pressures of 175 pounds per square inch. It is regularly furnished in sizes 1¼ inches to 6 inches, inclusive, in 20-foot lengths, with threaded joints for rapid assembly above ground, and can also be supplied in 5, 10, and 15-foot lengths. Expansion joints, made up with one-end wrenches after sections as long as 80 to 100 feet have been lowered into the trench, provide for axial and to some extent for lateral movement, and are designed to assure a bottle-tight joint under the service conditions for which the pipe has been designed.

Cast iron used in the "Hi-Test" pipe has an ultimate tensile strength of 35,000 pounds per square inch. Minimum bursting pressures for the threaded pipe range from 7,000 pounds per square inch for the 1¼-inch diameter size to 1,500 pounds for the 6-inch size.

Hard-Facing Materials

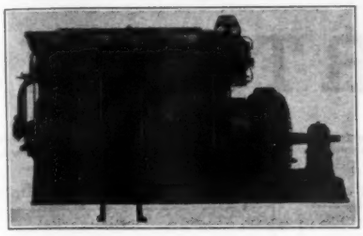
Haynes Stellite Co., Kokomo, Ind., has added four new sizes of Haystellite inserts and a series of new rods known as Tube Haystellite to its line of hard-setting and hard-facing materials for oil well drilling tools. Haystellite inserts are now available in 11 standard sizes and shapes, with a special coating so that they will "tin" more easily, thus assuring a better bond with the steel. The

11 sizes consist of six different cross sections. Each has a specific use in producing the most efficient cutting edge for various drilling tools and formations. The addition of the Tube Haystellite to the present series of Haystellite composite rods now makes available to oil well drillers a complete selection of rods for every type of hard-facing job they are likely to encounter.

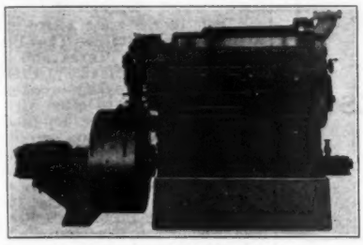
Improvements in the Design of Diesels Are Recorded

Progress in the design of Cooper-Bessemer Diesel engines during the last year has centered on three principal objectives:

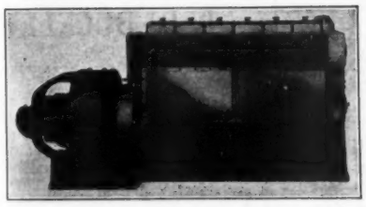
First, the design of engines that in all details



Type GN, in 3, 4, 6 and 8 cylinders



Type EN, in 3, 4, 6 and 8 cylinders



Type BN, in 3, 4, 6 and 8 cylinders

are distinctly Diesels, borrowing little or nothing from steam, gas, or gasoline prime movers.

Second, use of materials specially suited to the conditions of Diesel operation, in contradistinction to materials commonly used in the construction of other types of power units which are intended for a quite different set of duties.

Third, perfection of a fuel-injection system that overcomes all the disadvantages of the common-rail system and retains all of its advantages.

As evidence of the progress that this 102-year-old engine builder has made in these three directions, Cooper-Bessemer points out the new N line of multicylinder Diesels.

Four new engineering developments are common to the N line. Steel through-bolts connect the cylinder heads to the bases, putting the cylinder block and center frame in compression. Cylinder liners are suspended from cylinder heads instead of being pinched between heads and cylinder block. The patented wristpin construction practically doubles the effective wristpin bearing areas. On all N line engines except the smallest type, a patented atmospheric-relief injection system is used.

BJ Making Rannett Pumps

Byron Jackson Co., Berkeley, Calif., has entered into a contract with the Continental Oil Co., owner of patents No. 1,908,627 and No. 1,968,566, for the manufacture of Rannett pumps under exclusive license. The first shipment of 400-horsepower, 6-inch, 8-stage units has been completed for the Great Lakes Pipe Line Co., and the pumps installed on the new gasoline distribution line between Des Moines and St. Paul-Minneapolis.

Here and There With Men Who Manufacture Equipment

James T. Sutliff, who for many years was located at the factory in Connersville, Ind., is now in the Chicago office of the Roots-Connersville Blower Corp., 20 North Wacker Drive.

M. N. Dannenbaum Co., of Houston, Tex., is now district representative in the Texas territory for the Coppus Engineering Corp. of Worcester, Mass. Dannenbaum, located in the Shell Building, will handle a full line of Coppus air filters.

Leonard Price has been promoted to supervisor of mechanical rubber goods sales for the Pacific Coast division of the Thermoid Rubber Co., Trenton, N. J. His headquarters will remain in Los Angeles. L. E. Kitson succeeds him as district manager on the Pacific Coast.

The complete line of Reeves variable speed control equipment is now distributed in Oklahoma, under special arrangement with Webb Belting Co., of Kansas City, Mo., by Allied Equipment Co., 1639 West Main Street, Oklahoma City, Okla.

Foster Wheeler Corp. board of directors elected Harry S. Brown president; David McCulloch, executive vice president; Walter F. Keenan, Jr., George B. Ferrier and J. J. Nelis vice presidents, and P. N. Wenz secretary.

J. Frederic Byers, chairman of the board of A. M. Byers Co., Pittsburgh, Pa., has announced the company's third major expansion program in recent years. Steel pipe is to be manufactured in addition to the present complete line of wrought-iron products and under the same executive supervision that applies to its wrought-iron pipe.

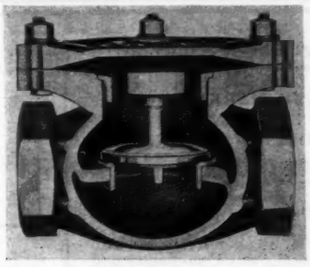
Edgar M. Queeny, president of Monsanto Chemical Co., announces that the name of the Swann Chemical Co., Monsanto subsidiary, with a plant in Anniston, Ala., has been changed to Monsanto Chemical Co. of Alabama. Administrative and sales offices of the Alabama subsidiary, together with those of another former Swann property, Provident Chemical Co., St. Louis, Mo., have been moved to Monsanto's new Administration Building in St. Louis. Sales offices of a third former Swann company, Wilckes, Martin, Wilckes Co., have been consolidated with Monsanto's New York office.

The San Francisco branch of Four Wheel Drive Auto Co., Clintonville, Wis., is to be placed in charge of S. F. Wick. The branch is at 1301 Howard Street. Mr. Wick succeeds M. O. Stockland, Jr., who is transferred to the home office in Clintonville. A. E. Fredenberg succeeds Mr. Wick as branch division manager. W. C. Merrill, editor of the FWD house organ, is to take over the oil-field sales territories of Louisiana, the Gulf Coast and southern Texas.

Device Prevents Vacuum Loss Through Admission of Air

The Imperial Automat, an automatic shutoff valve, is offered by W. L. Walker Co., 800 South Main Avenue, Tulsa, to enable operators to pump fluids from any number of tanks or pools set on different levels simultaneously, without destroying the vacuum, should one or more tanks become empty before the others. It is said to solve the problem of excluding air from vacuum lines.

Old oil fields are using the gravity system of gathering oil into the pumping stations because it is the most economical except for the loss of vac-



uum through air admission. Prevention of this loss is the chief function of the Automat.

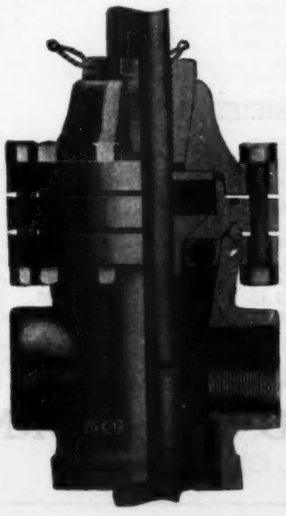
The device, according to the manufacturer, eliminates "void runs" and the consequent evaporation loss, estimated to be from 1 per cent to 3 per cent every 24 hours. It increases all "runs."

D + B Plans $100,000 Expansion

The D + B Pump & Supply Co., division of Emsco Derrick & Equipment Co., according to Charles D. Wagner, vice president and manager, has completed plans for the expenditure of $100,000 in enlarging the D + B plant in Dallas, Tex., installing precision machinery and equipment for the manufacture of D + B sucker rods, pumps and fittings, and the construction of field service shops in various major oil fields. Continental Supply Co. is exclusive D + B Pump & Supply Co. distributor in the Mid-Continent.

May Drill in Safely With Either Oil or Water

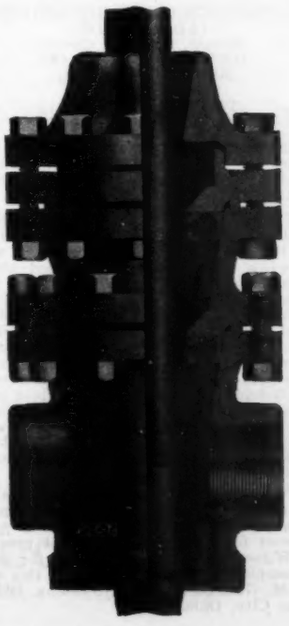
Oil Center Tool Co., Houston, Tex., announces Type T-3 tubing head, which allows a well to be drilled in safely with either oil or water, thereby keeping the drilling mud off the oil-bearing sand. This head is shown here in a running position with two packing glands and in a set position with a single gland. As many of these packing units can be employed as the job may require, building one upon the other, as shown in the open position, by adding extra bowl and packing.



The manufacturers explain that this head makes possible drilling in against pressure, running tubing against pressure, and washing behind the liner, up as many joints as is desired. The slips on which tubing suspends can be used in the operation of running tubing.

An additional safety factor embodied in the new design is that the O-C-T type H blowout preventer is made to fit on top of the head.

The trouble encountered in sealing off the oil sand by the weight of present-day heavy drilling mud necessary to combat blowouts gave rise to this new head, which the manufacturers say offers a mechanical means of protecting against pressure without having to resort to heavy drilling slush in completing wells.



Michigan Gas Reserves

MUSKEGON, Mich., Aug. 12.—Independent Michigan operators represented by Henry G. Hunt, executive secretary of the Oil and Gas Association of Michigan, and officials of two major gas pipe lines in the state, Consumers Power Co. and American Michigan Pipe Line Co., clashed at a double hearing in Lansing over natural gas reserves and extensions of state markets. Hearings were conducted on two successive days by a state legislative committee which has been investigating conditions in the oil and gas industry for several weeks and by the Michigan Public Utilities Commission.

Dean W. Flowers, vice president and general manager of Muskegon Gas Co., and Glenn M. Chamberlain, of Grand Rapids, president of American-Michigan Pipe Line Co., two affiliated Muskegon subsidiaries of the American Light & Traction Co., maintained there were insufficient reserves in the Austin Township, Mecosta County, Field, largest in the state, to supply Muskegon for more than 10 years. Both said they would welcome further developments which would assure Grand Rapids of a sufficient supply to warrant a pipe line extension to that city.

D. E. Karn, vice president and general manager of Consumers Power Co., said his company was ready and willing to use Michigan natural gas when brought to the gates of any city in which it operates but opposed unsound speculation in gas lines without sufficient reserves for a period of years in any community.

It was revealed in geologists' testimony the Austin Field has proved reserves of about 11,000,000,000 feet from which about 750,000,000 feet will be taken this year with increases anticipated in future years.

L. C. McCloskey, vice president of Imperial Oil, Ltd., was in Vancouver, British Columbia, recently in connection with an investigation by a British Columbia commission of the coal and oil industries. On the return trip he stopped off at Calgary, Alberta, and visited the Turner Valley Field.

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1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
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This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line. PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.55*	*$3.30*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*
7 Lines	*$2.45*	*$4.20*	*$5.95*	*$7.70*
8 Lines	*2.80*	*4.80*	*6.80*	*8.80*
9 Lines	*3.15*	*5.40*	*7.65*	*9.90*
10 Lines	*3.50*	*6.00*	*8.50*	*11.00*

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Tulsa, Oklahoma